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STRUCTURE FILE UPDATES: 23 MAR 2009 HIGHEST RN 1125796-38-4  
DICTIONARY FILE UPDATES: 23 MAR 2009 HIGHEST RN 1125796-38-4

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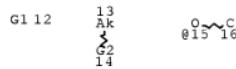
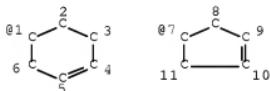
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<http://www.cas.org/support/stngen/stndoc/properties.html>

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L1 STR



VAR G1=1/7  
VAR G2=X/15  
NODE ATTRIBUTES:  
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GGCAT IS SAT AT 13  
DEFAULT ECLEVEL IS LIMITED

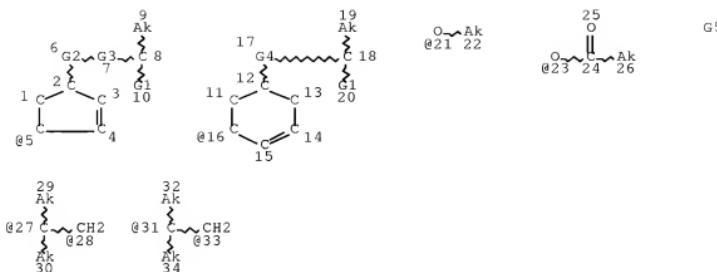
GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

L2 SCR 1992 OR 2021 OR 2016 OR 2026  
L3 ( 41607)SEA FILE=REGISTRY SSS FUL L1 NOT L2  
L4 STR



Page 1-A

35

Page 1-B

VAR G1=21/23  
 REP G2=(0-1) CH2  
 REP G3=(0-3) 27-6 28-8  
 REP G4=(0-3) 31-12 33-18  
 VAR G5=5/16

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 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 35

## STEREO ATTRIBUTES: NONE

L5 362 SEA FILE=REGISTRY SUB=L3 SSS FUL L4

100.0% PROCESSED 41607 ITERATIONS  
 SEARCH TIME: 00.00.01

362 ANSWERS

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(FILE 'HOME' ENTERED AT 16:07:27 ON 24 MAR 2009)

FILE 'REGISTRY' ENTERED AT 16:08:09 ON 24 MAR 2009  
ACT HUH779S2/A

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L1                   STR  
L2                   SCR 1992 OR 2021 OR 2016 OR 2026  
L3 ( 41607)SEA SSS FUL L1 NOT L2  
L4                   STR  
L5                   362 SEA SUB=L3 SSS FUL L4  
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FILE 'HCAPLUS' ENTERED AT 16:11:42 ON 24 MAR 2009  
L6                   2013 SEA ABB=ON PLU=ON L5  
L7                   QUE ABB=ON PLU=ON ISOBUTENE? OR ISOBUTYLENE? OR  
                    POLYISOBUTENE? OR POLYISOBUTYLENE  
L8                   QUE ABB=ON PLU=ON POLYMER? OR COPOLYMER? OR TERPOLYMER?  
                    OR HOMOPOLYMER?  
L9                   0 SEA ABB=ON PLU=ON L6 AND L7  
L10                  66 SEA ABB=ON PLU=ON L6 AND L8  
L11                  QUE ABB=ON PLU=ON ?POLYMER?  
L12                  76 SEA ABB=ON PLU=ON L6 AND L11  
L13                  9 SEA ABB=ON PLU=ON L5(L)L11  
L14                  64 SEA ABB=ON PLU=ON L12 AND (PY<=2004 OR PRY<=2004 OR  
                    AY<=2004)  
L15                  QUE ABB=ON PLU=ON PROCESS? OR METHOD?  
L16                  20 SEA ABB=ON PLU=ON L14 AND L15  
L17                  17 SEA ABB=ON PLU=ON L16 NOT L13

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 16:18:51 ON 24 MAR 2009  
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FILE COVERS 1907 - 24 Mar 2009 VOL 150 ISS 13  
FILE LAST UPDATED: 23 Mar 2009 (20090323/ED)

HCplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d ibib abs hitstr hitind l13 1-9

L13 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2008:619940 HCAPLUS Full-text  
 DOCUMENT NUMBER: 148:592426  
 TITLE: Polymeric benefit agent-containing delivery particle  
 INVENTOR(S): Smets, Johan; Sands, Peggy Dorothy;  
 Guinebretiere, Sandra Jacqueline; Pintens, An;  
 Dihora, Jiten Odhavij  
 PATENT ASSIGNEE(S): Belg.  
 SOURCE: U.S. Pat. Appl. Publ., 16pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080118568	A1	20080522	US 2007-986094	200711 20
WO 2008063635	A1	20080529	WO 2007-US24247	200711 20
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
WO 2008066773	A2	20080605	WO 2007-US24357	200711 20
WO 2008066773	A3	20080912		
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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG,				

ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA  
 PRIORITY APPLN. INFO.: US 2006-860645P P

200611  
 22

US 2006-861996P P  
 200611  
 30

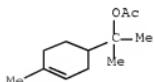
AB The present invention relates to particles for delivery of benefit agents, e.g., perfumes, silicone oils, waxes, hydrocarbons, higher fatty acids, essential oils, lipids, skin coolants, vitamins, sunscreens, antioxidants, sanitization agents, fabric care agents, etc., compns. comprising said particles, and processes for making and using the aforementioned particles and compns. When employed in compns., for example, compns. for cleaning, fabric care, or coating onto various substrates, textiles or surfaces, such particles increase the efficiency of benefit agent delivery, thereby allowing reduced amts. of benefit agents to be employed. In one aspect of the invention, benefit agent-containing delivery particles are manufactured and are subsequently coated with a material to reduce the rate of leakage of the benefit agent from the particles when the particles are subjected to a bulk environment containing, for example, surfactants, polymers, and solvents. In addition to allowing the amount of benefit agent to be reduced, such particles allow a broad range of benefit agents to be employed. Thus, an 80 weight% core/20 weight% wall urea-based polyurea capsule comprising a fragrance oil as benefit agent was prepared. To 2 g of urea dissolved in 20 g water was added 1 g of resorcinol followed by 20 g of 37 weight% formaldehyde solution, and the pH of the slurry was adjusted to 8.0. The reactants were allowed to sit at 35° for 2 h. Then, 80 g of fragrance oil was added slowly to the urea-formaldehyde solution, the mixture was agitated to achieve a mean droplet size of 31  $\mu$ m, the pH of the slurry was adjusted to 3.0 to initiate the condensation reaction, and the solution was heated to 65° and allowed to react in a constant temperature water bath, while slowly agitating the contents of the mixture. The contents are allowed to react for 4 h at 65°. The Volume Average Fracture Strength Fracture was determined to be 1.5 MPa.

IT 80-26-2

RL: COS (Cosmetic use); TEM (Technical or engineered material use);  
 BIOL (Biological study); USES (Uses)  
 (polymeric particles for benefit agents, such as  
 perfumes)

RN 80-26-2 HCAPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
 (CA INDEX NAME)



INCL 424489000; 252008810; 252008910; 510101000; 510441000; 510515000;  
 512004000

CC 62-1 (Essential Oils and Cosmetics)

Section cross-reference(s): 37, 46, 63

IT 56-81-5, Glycerine, biological studies 78-69-3,  
 3,7-Dimethyloctan-3-ol 78-70-6, 3,7-Dimethylocta-1,6-dien-3-ol

80-26-2 80-54-6 88-41-5, Cyclohexanol,  
 2-(1,1-dimethylethyl)-, acetate 93-04-9, 2-Methoxynaphthalene  
 93-29-8, 4-Acetoxy-3-methoxy-1-propenylbenzene 101-86-0,  
 $\alpha$ -Hexylcinnamaldehyde 104-67-6,  
 5-Heptyldihydro-2(3H)furanone 107-92-6D, Butanoic acid, esters  
 109-52-4D, Pentanoic acid, esters 110-41-8 112-31-2, Decanal  
 115-95-7 118-71-8, 3-Hydroxy-2-methyl-4-pyrone 121-32-4,  
 4-Hydroxy-3-ethoxybenzaldehyde 121-33-5,  
 4-Hydroxy-3-methoxybenzaldehyde 123-68-2, Hexanoic acid 2-propenyl  
 ester 124-13-0, Octanal 127-51-5 142-92-7, Hexyl ethanoate  
 2277-19-2 2349-07-7, Hexyl 2-methyl propanoate 2396-84-1, Ethyl  
 2,4-hexadienoate 2705-87-5 3681-73-0, Geranyl palmitate  
 4940-11-8, 3-Hydroxy-2-ethyl-4-pyrone 6901-97-9 7452-79-1, Ethyl  
 2-methylbutanoate 7631-86-9, Silicon dioxide, biological studies  
 7779-95-5, 5-Hydroxydodecanoic acid 8013-90-9, Ionone 10339-55-6  
 10461-98-0, 2-Cyclohexylidene-2-phenylacetone 14476-37-0,  
 4-Undecanone 14901-07-6, 4-(2,6,6-Trimethyl-1-cyclohexenyl)-3-  
 buten-2-one 22629-49-8, 2-Tridecenenitrile 27939-60-2  
 39255-32-8, Ethyl-2-methyl pentanoate 43052-87-5 51566-62-2,  
 3,7-Dimethyl-6-octene nitrile 53219-21-9 54464-57-2,  
 7-Acetyl-2,3,4,5,6,7,8-octahydro-1,1,6,7-tetramethylnaphthalene  
 57378-68-4 66576-71-4 67634-24-6 68901-15-5 92618-89-8  
 129520-41-8 210035-91-9 224031-70-3 899834-70-9  
 RL: COS (Cosmetic use); TEM (Technical or engineered material use);  
 BIOL (Biological study); USES (Uses)  
 (polymeric particles for benefit agents, such as  
 perfumes)

L13 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2008:94956 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 148:169503  
 TITLE: Manufacture of organic vehicles by solution  
 polymerization of (meth)acrylates, and pastes  
 containing them  
 INVENTOR(S): Fujinobu, Takafumi; Miyazaki, Miho  
 PATENT ASSIGNEE(S): Yasuhara Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 27pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2008013755	A	20080124	JP 2007-148826	200706 05
PRIORITY APPLN. INFO.:			JP 2006-156802	A 200606 06

OTHER SOURCE(S): MARPAT 148:169503  
 AB The organic vehicles for pastes used in manufacture of multilayer ceramic  
 electronic components or plasma displays, are manufactured by solution  
 polymerization of monomers mainly containing alkyl (meth)acrylates in organic  
 solvents used for the pastes. The pastes do not cause corrosion of ceramic  
 green sheets when applied on the sheets by screen printing. Thus, Me  
 methacrylate, isobornyl methacrylate, and methacrylic acid were solution-

polymerized in isobornyl isobutyrate (I; butyral resin solubility only 6.8 mg/25 g) in the presence of Nypor BMT-K 40 (peroxide), and the resulting copolymer was diluted with I to give an organic vehicle (solids concentration 30%) in 90.0% yield. The vehicle (25 g) was mixed with 25 g Pd powder to give an elec. conductive paste showing viscosity  $\geq$ 16,000 and 50 Pa-s at solids concentration 30 and 10%, resp., thermal decomposition temperature 267°, and good paste stability and no gelling after 30-day storage at 25°.

IT 80-26-2, Terpinyl acetate 1002120-11-7

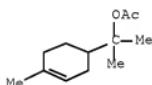
RL: MOA (Modifier or additive use); NUU (Other use, unclassified);

USES (Uses)

(manufacture of storage-stable organic vehicles by solution polymer  
of alkyl (meth)acrylates in organic solvents for pastes for  
multilayer ceramic electronic parts or plasma displays)

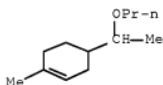
RN 80-26-2 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



RN 1002120-11-7 HCPLUS

CN Cyclohexene, 1-methyl-4-(1-propoxyethyl)- (CA INDEX NAME)



CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 57, 74, 76

IT 80-26-2, Terpinyl acetate 100-66-3, Anisole, uses

103-28-6, Benzyl isobutyrate 136-60-7, n-Butyl benzoate

1888-80-8 7460-78-8 20279-29-2 46337-76-2 154970-45-3

223450-28-0 251294-49-2 875628-32-3 1002120-05-9

1002120-06-0 1002120-07-1 1002120-09-3 1002120-10-6

1002120-11-7 1002120-13-9

RL: MOA (Modifier or additive use); NUU (Other use, unclassified);

USES (Uses)

(manufacture of storage-stable organic vehicles by solution polymer  
of alkyl (meth)acrylates in organic solvents for pastes for  
multilayer ceramic electronic parts or plasma displays)

L13 ANSWER 3 OF 9 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:170649 HCPLUS Full-text

DOCUMENT NUMBER: 144:243455

TITLE: Terpene ether developer solvents for  
flexographic printing photopolymer plates

INVENTOR(S): Wyatt, Marion F.; Gallagher, R. Scott

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 7 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060040218	A1	20060223	US 2004-920951	200408 18
PRIORITY APPLN. INFO.:			US 2004-920951	200408 18

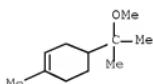
AB Disclosed is a photopolymer developing solution that includes at least one terpene ether. The terpene ether can contain a Me and/or Et ether and be monocyclic. The terpene ether may be based on an orange flower ether having a pleasant odor. The terpene ether has a flash point above 140°F and a relatively low vapor pressure. The photopolymer developing solution may further include a co-solvent and/or a non-solvent. Typically, the co-solvent is benzyl alc. Flexog. printing plate AFP HD (0.067", mfg. by Asahi) was UV back-exposed, then top-exposed through a neg. mask, and developed by immersion with rotary brushing in a mixture containing 50 weight% orange flower ether (a compound with a pleasant odor), and 50 weight% benzyl alc. as a co-solvent, at 25°. The developing process was continued for 11.1 min (wash time) until the plate floor was reached; the final plate thickness was 0.0685" (plate swell in thousandths: 1.5). The developed plate was then dried at 140°F for 60 min (dry time) until it returned to the original thickness. For comparison, the flexog. printing plate was developed using a mixture of 50 weight% aromatic hydrocarbon solvent Sure-Sol 150 (mfg. by Koch Industries) and 50 weight% benzyl alc. With comparative developing solution the following parameters were obtained: wash time 5.5 min, final plate thickness 0.0710" (plate swell 4.0), dry time > 120 min.

IT 14576-08-0, Orange flower ether

RL: TEM (Technical or engineered material use); USES (Uses)  
 (orange flower ether; terpene ether developer solvents for  
 flexog. printing photopolymer plates)

RN 14576-08-0 HCAPLUS

CN Cyclohexene, 4-(1-methoxy-1-methylethyl)-1-methyl- (CA INDEX NAME)

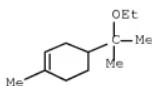


IT 27153-54-4

RL: TEM (Technical or engineered material use); USES (Uses)  
 (terpene ether developer solvents for flexog. printing  
 photopolymer plates)

RN 27153-54-4 HCAPLUS

CN Cyclohexene, 4-(1-ethoxy-1-methylethyl)-1-methyl- (CA INDEX NAME)



INCL 430431000  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38

IT 14576-08-0, Orange flower ether

RL: TEM (Technical or engineered material use); USES (Uses)  
 (orange flower ether; terpene ether developer solvents for flexog. printing photopolymer plates)

IT 2565-82-4, Geranyl methyl ether 10395-54-7, Bornyl methyl ether 13213-31-5 19316-72-4, Bornyl ethyl ether 27153-53-3, Fenchyl methyl ether 27153-54-4 40267-72-9, Geranyl ethyl ether 55708-37-7 60763-44-2 67800-86-6, Fenchyl ethyl ether 68279-51-6 69680-35-9, 3-(2-Propynylxyloxy)-2(10)-pinene 69680-36-0, 3-(Methallyloxy)-2(10)-pinene 69744-17-8, Carvyl ethyl ether 69744-18-9, Carvyl methyl ether 72845-33-1 875628-32-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (terpene ether developer solvents for flexog. printing photopolymer plates)

L13 ANSWER 4 OF 9 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:287423 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 143:7838

TITLE: Reactions of turpentine using Zr-MCM-41 family mesoporous molecular sieves

AUTHOR(S): Li, Lu; Yu, Shitao; Liu, Fusheng; Yang, Jinzong; Zhaug, Shufen

CORPORATE SOURCE: State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian, 116012, Peop. Rep. China

SOURCE: Catalysis Letters (2005), 100(3-4), 227-233  
 CODEN: CALEER; ISSN: 1011-372X

PUBLISHER: Springer

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:7838

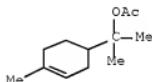
AB The mesoporous mol. sieve Zr-MCM-41 was synthesized under hydrothermal conditions. Zr-MCM-41 material was impregnated using sulfuric acid to prepare SO42-/Zr-MCM-41. The obtained materials were characterized by XRD, FT-IR, N2 adsorption/desorption and NH3-TPD anal. technique. The results indicated that SO42-/Zr-MCM-41 was of better mesoporous structure, long range ordering and crystallites, and that SO42- existed in the skeleton of Zr-MCM-41 and enhanced its acidity. SO42-/Zr-MCM-41 were firstly used as catalyst in the esterification of terpineol. The catalytic results were compared with those obtained by using sulfuric acid (33%), HY, HZSM-5 and SO42-/ZrO2 as catalysts. It was showed that SO42-/Zr-MCM-41 were not only of better catalytic activity and selectivity, but also of better regenerable performance. The effects of synthesis methods of catalysts and Si/Zr mole ratio on catalytic properties were also studied. In addition, AlCl3 was supported on the synthesized mesoporous mol. sieves to get composite catalysts that were firstly used to

catalyze the polymerization of  $\alpha$ -pinene. It was showed that the catalytic result of the composite catalyst was better than that AlCl<sub>3</sub> alone.

IT 80-26-2P,  $\alpha$ -Terpineol acetate  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of Zr-MCM-41 and its use as an esterification and polymerization catalyst)

RN 80-26-2 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
 (CA INDEX NAME)



CC 30-10 (Terpenes and Terpenoids)  
 Section cross-reference(s): 35, 67, 78

IT 80-26-2P,  $\alpha$ -Terpineol acetate 8013-00-1P, Terpinene  
 25766-18-1P, Poly( $\alpha$ -pinene)  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of Zr-MCM-41 and its use as an esterification and polymerization catalyst)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L13 ANSWER 5 OF 9 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2002:539719 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 137:94566  
 TITLE: Method for obtaining a stabilized polymer-based  
 photochromic latex, latex obtained and use  
 thereof in ophthalmic optics  
 INVENTOR(S): Tardieu, Pascale; Maisonnier, Sylvette; Robert,  
 Anne; Cano, Jean-Paul  
 PATENT ASSIGNEE(S): Essilor International Compagnie Generale  
 D'optique, Fr.  
 SOURCE: PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002055564	A1	20020718	WO 2002-FR116	200201

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, CZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
 NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,  
 TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

FR 2819258	A1	20020712	FR 2001-343	
				200101
				11
FR 2819258	B1	20030411		
CA 2433984	A1	20020718	CA 2002-2433984	
				200201
				11
AU 2002229884	A1	20020724	AU 2002-229884	
				200201
				11
AU 2002229884	B2	20051124		
US 20030100672	A1	20030529	US 2002-44608	
				200201
				11
US 6740699	B2	20040525		
EP 1363952	A1	20031126	EP 2002-710986	
				200201
				11
EP 1363952	B1	20050727		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2002006384	A	20040203	BR 2002-6384	
				200201
				11
JP 2004527593	T	20040909	JP 2002-556632	
				200201
				11
JP 4067405	B2	20080326		
CN 1531556	A	20040922	CN 2002-803615	
				200201
				11
CN 1233666	C	20051228		
AT 300557	T	20050815	AT 2002-710986	
				200201
				11
ES 2244755	T3	20051216	ES 2002-710986	
				200201
				11
ZA 2003005158	A	20040826	ZA 2003-5158	
				200307
				02
MX 2003006237	A	20041015	MX 2003-6237	
				200307
				11
KR 789947	B1	20071231	KR 2003-709288	
				200307
				11
PRIORITY APPLN. INFO.:			FR 2001-343	A
				200101
				11
			WO 2002-FR116	W
				200201
				11

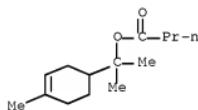
AB The invention concerns a method for obtaining a photochromic latex comprising free radical polymerization in aqueous emulsion of an initial polymerizable mixture, comprising  $\geq 1$  polymerizable monomer and  $\geq 1$  photochromic compound and adding to the initial mixture, during polymerization, or to the final latex  $\geq 1$  agent stabilizing the photochromic properties selected among cyclopentene (compds.), cyclohexene (compds.), cycloheptene (compds.), cyclooctene (compds.), and ethylenically unsatd. compds. having, in position  $\alpha$  relative to the ethylenic unsatn., a carbon atom bearing a free hydroxy group. The invention is useful for making photochromic films.

IT 2153-28-8,  $\alpha$ -Terpinyl butyrate

RL: MOA (Modifier or additive use); USES (Uses)  
(obtaining stabilized polymer-based photochromic  
latexes for ophthalmic lenses)

RN 2153-28-8 HCPLUS

CN Butanoic acid, 1-methyl-1-(4-methyl-3-cyclohexen-1-yl)ethyl ester  
(CA INDEX NAME)

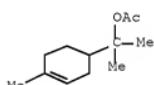


IT 80-26-2 80-27-3,  $\alpha$ -Terpinyl propionate

RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer; obtaining stabilized polymer-based  
photochromic latexes for ophthalmic lenses)

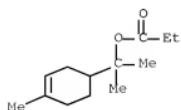
RN 80-26-2 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



RN 80-27-3 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-propanoate  
(CA INDEX NAME)



IC ICM C08F002-44  
 CC 37-3 (Plastics Manufacture and Processing)  
 IT 470-99-5, 3,5,5-Trimethyl-2-cyclohexen-1-ol 562-74-3 822-67-3,  
 2-Cyclohexen-1-ol 2153-28-8, *α*-Terpinyl butyrate  
 18448-47-0, Methyl 1-cyclohexene-1-carboxylate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (obtaining stabilized polymer-based photochromic  
 latexes for ophthalmic lenses)  
 IT 78-59-1, Isophorone 80-26-2 80-27-3,  
*α*-Terpinyl propionate 98-55-5, *α*-Terpineol 99-48-9,  
 Carveol 107-18-6, Allyl alcohol, uses 110-83-8, Cyclohexene,  
 uses 142-29-0, Cyclopentene 472-66-2,  
 2,6,6-Trimethyl-1-cyclohexene-1-acetaldehyde 473-67-6, Verbenol  
 500-02-7, 4-Isopropyl-2-cyclohexen-1-one 513-42-8, Methallyl  
 alcohol 515-00-4, Myrtenol 556-82-1, 3-Methyl-2-butene-1-ol  
 591-47-9, 4-Methyl-1-cyclohexene 591-48-0, 3-Methyl-1-cyclohexene  
 591-49-1, 1-Methylcyclohexene 598-32-3, 3-Buten-2-ol 928-95-0,  
 trans-2-Hexen-1-ol 931-88-4, Cyclooctene 1073-13-8,  
 4,4-Dimethyl-2-cyclohexen-1-one 1123-09-7,  
 3,5-Dimethyl-2-cyclohexen-1-one 1193-18-6,  
 3-Methyl-2-cyclohexen-1-one 4407-36-7, trans-Cinnamyl alcohol  
 6117-80-2, cis-2-Butene-1,4-diol 6117-91-5, Crotyl alcohol  
 21378-21-2, 3-Methyl-2-cyclohexen-1-ol 55131-20-9,  
 trans-2-Methyl-3-phenyl-2-propen-1-ol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (stabilizer; obtaining stabilized polymer-based  
 photochromic latexes for ophthalmic lenses)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L13 ANSWER 6 OF 9 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2001:217424 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 134:239245  
 TITLE: Vinyl acetate polymer-containing starch  
 composition with low irritating odor  
 INVENTOR(S): Sotoma, Takami  
 PATENT ASSIGNEE(S): Kao Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001081669	A	20010327	JP 1999-254006	199909 08
PRIORITY APPLN. INFO.:			JP 1999-254006	199909 08

AB Title starch composition contains  $\geq 1$  fragrance selected from undecyl aldehyde, undecylene aldehyde, dodecyl aldehyde,  $\gamma$ -undecalactone, allyl amylglycolate, allyl cyclohexane propionate, allyl heptanoate, amber core, ambroxan, amyl salicylate, benzyl acetate, benzyl benzoate, benzyl salicylate, cis-3-hexenyl

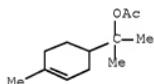
salicylate, cis-jasmone, citral, citronellol, coumarin, cyclamen aldehyde, dimethylbenzyl carbinal acetate, decenol, dihydromyrcenol, fructose, fruitone, geraniol, edion, heliotropin, hexylcinnamyl aldehyde,  $\alpha$ -ionone, acetoxyamyl tetrahydropyran, lavender oil, lemon oil, linalil, lime oil, linalool, linalyl acetate, liral, magnol, methyliionone-G, musk ketone, myrac aldehyde, nerol, o-tert-butylcyclohexyl acetate, p-tert-butylcyclohexyl acetate, patchouli alc., pearlide, phenoxyanol, phenylethyl alc., poarenet, rose absolute, rose oxide, rosemary oil, santalidol, terpineol, terpinyl acetate, triplal, vanillin, ylang ylang oil, and  $\alpha$ -damascone.

IT 80-26-2

RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of vinyl acetate polymer-containing starch composition  
with low irritating odor)

RN 80-26-2 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha$ , $\alpha$ ,4-trimethyl-, 1-acetate  
(CA INDEX NAME)



IC ICM D06M015-333

CC 44-8 (Industrial Carbohydrates)

IT 60-12-8, Phenylethyl alcohol 78-70-6, Linalool 80-26-2  
80-54-6, Lilial 81-14-1, Musk ketone 88-41-5,  
o-tert-Butylcyclohexyl acetate 91-64-5, Coumarin 101-86-0,  
 $\alpha$ -Hexylcinnamyl aldehyde 103-95-7, Cyclamen aldehyde  
104-67-6,  $\gamma$ -Undecalactone 106-22-9, Citronellol 106-24-1,  
Geraniol 106-25-2, Nerol 112-44-7, Undecyl aldehyde 112-45-8,  
Undecylene aldehyde 112-54-9, Dodecyl aldehyde 115-95-7, Linalyl  
acetate 118-58-1, Benzyl salicylate 120-51-4, Benzyl benzoate  
120-57-0, Heliotropin 121-33-5, Vanillin 127-41-3,  
 $\alpha$ -Ionone 127-48-0, Edion 140-11-4, Benzyl acetate  
142-19-8, Allyl heptanoate 151-05-3, Dimethylbenzyl carbinal  
acetate 488-10-8, cis-Jasmone 1222-05-5, Pearlide 1335-46-2,  
Methyliionone 2050-08-0, Amyl salicylate 2705-87-5, Allyl  
Cyclohexane propionate 5392-40-5, Citral 5986-55-0, Patchouli  
alcohol 6413-10-1, Fructose 8000-41-7, Terpineol 16409-43-1,  
Rose oxide 17735-99-8, Santalidol 30385-25-2, Dihydromyrcenol  
31906-04-4, Liral 32210-23-4, p-tert-Butylcyclohexyl acetate  
37677-14-8, Myrac aldehyde 43052-87-5,  $\alpha$ -Damascone  
55066-48-3, Phenoxyanol 62053-09-2, Decenol 65405-77-8,  
cis-3-Hexenyl salicylate 68039-49-6, Triplal 68140-53-4,  
Fruitone 124899-75-8 139504-68-0, Amber core 176201-49-3,  
Poarenet 177771-82-3, Ambroxan 177771-94-7, Magnol 330437-40-6

RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of vinyl acetate polymer-containing starch composition  
with low irritating odor)

L13 ANSWER 7 OF 9 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:451424 HCPLUS Full-text

DOCUMENT NUMBER: 131:94895

TITLE: Developer solvent for photopolymer printing

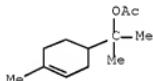
INVENTOR(S): plates and method  
 Eklund, Richard W.  
 PATENT ASSIGNEE(S): Nupro Technologies, Inc., USA  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9935538	A1	19990715	WO 1999-US77	19990105
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2318958	A1	19990715	CA 1999-2318958	19990105
AU 9921024	A	19990726	AU 1999-21024	19990105
EP 1046082	A1	20001025	EP 1999-901291	19990105
EP 1046082	B1	20040519		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 267412	T	20040615	AT 1999-901291	19990105
US 6248502	B1	20010619	US 2000-631975	20000803
PRIORITY APPLN. INFO.:			US 1998-4914	A 19980109
			US 1999-224994	A 19990104
			WO 1999-US77	W 19990105

AB Flexog. printing plates crosslinkable by photopolymer. are produced by exposing the plates to a light source and washing out (developing) with a solvent the noncrosslinked areas that are masked out during the exposure process. The invention provides terpene ester-based solvents suitable for use in the development of photopolymer printing plates. The solvents, which include terpene esters alone or terpene esters mixed with organic solvents and/or

nonsolvents, are effective in developing a large number of different photopolymer printing plates and can produce images superior to those obtained with com. available solvents currently used in such applications.

IT 80-26-2  
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (developers for photopolymer compns. for flexog.  
 printing plate preparation containing)  
 RN 80-26-2 HCPLUS  
 CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
 (CA INDEX NAME)



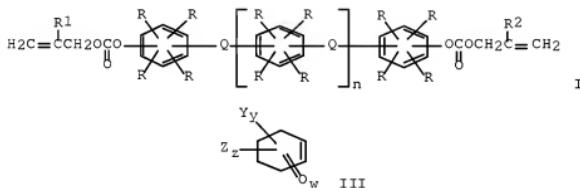
IC ICM G03F007-26  
 ICS G03F007-30; G03C005-18  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 80-26-2 115-95-7, Linalyl acetate 13851-11-1, Fenchyl acetate  
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (developers for photopolymer compns. for flexog.  
 printing plate preparation containing)  
 REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L13 ANSWER 8 OF 9 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1987:605231 HCPLUS Full-text  
 DOCUMENT NUMBER: 107:205231  
 ORIGINAL REFERENCE NO.: 107:32851a,32854a  
 TITLE: Compositions containing bisphenol bis(allylic carbonate) monomers and cyclohexenic compounds for producing polymers of high refractive index and low yellowness for ophthalmic use  
 INVENTOR(S): Misura, Michael Stephan; Sare, Edward John  
 PATENT ASSIGNEE(S): PPG Industries, Inc., USA  
 SOURCE: Eur. Pat. Appl., 37 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 224123	A2	19870603	EP 1986-115687	198611 12
EP 224123	A3	19890208		

EP 224123 R: DE, FR, GB, IT CA 1290489	B1 C	19911016 19911008	CA 1986-522570	198611 10
JP 62129337	A	19870611	JP 1986-276416	198611 19
JP 06045658 US 4959429	B A	19940615 19900925	US 1988-196861	198805 19
PRIORITY APPLN. INFO.:			US 1985-801166	A 198511 22
			US 1986-832555	A 198602 24

GI



AB Polymers useful for ophthalmic lenses contain monomers I (R = H, halo, alkyl, alkoxy; Q = O, SO, S, alkandiyl, alkylidene; R1, R2 = H, Me; n = 0-3), especially bisphenol A bis(allyl carbonate) (II), and a yellowness reducing amount of a cyclohexenic compound III (Y = alkyl; Z = OH, 2-oxoethyl, alkoxy carbonyl, alkylidene ester; w = 0, 1; y = 0-3; z = 0, 1; w + z = 1). II 922.5,  $\alpha$ -terpinyl acetate 13.6, benzyl acetate 9, cyclohexene 4.5, cyclohexanone 4.5, and iso-Bu methacrylate 45.5 parts were mixed. This solution 100 parts was combined with diisopropyl peroxodicarbonate 3 and zelac UN mold releasing agent 0.005 parts, to give a polymerizate 2.76 nm thick. The polymerizate had a yellowness index of 1.0, a Barcol hardness of 32 (0 s) and 30 (15s), and a refractive index of  $n_{D20} = 1.5554$ .

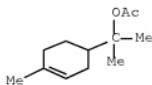
IT 80-26-2,  $\alpha$ -Terpinyl acetate 80-27-3,  
 $\alpha$ -Terpinyl propionate 2153-28-8,  $\alpha$ -Terpinyl butyrate

RL: BIOL (Biological study)

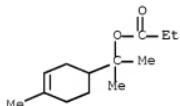
(eyeglass lenses containing bisphenol A bis(allyl carbonate) polymer and, reduced yellowness and high refractive index in)

RN 80-26-2 HCAPLUS

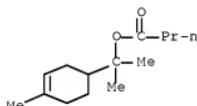
CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



RN 80-27-3 HCAPLUS  
 CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-propanoate  
 (CA INDEX NAME)



RN 2153-28-8 HCAPLUS  
 CN Butanoic acid, 1-methyl-1-(4-methyl-3-cyclohexen-1-yl)ethyl ester  
 (CA INDEX NAME)



IC ICM C08F018-24  
 ICS G02B001-04  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 37, 73  
 IT 80-26-2,  $\alpha$ -Terpinyl acetate 80-27-3,  
 $\alpha$ -Terpinyl propionate 110-83-8, Cyclohexene, biological  
 studies 2153-28-8,  $\alpha$ -Terpinyl butyrate  
 RL: BIOL (Biological study)  
 (eyeglass lenses containing bisphenol A bis(allyl carbonate)  
 polymer and, reduced yellowness and high refractive index  
 in)

L13 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1985:583393 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 103:183393  
 ORIGINAL REFERENCE NO.: 103:29463a,29466a  
 TITLE: Use of the methyl ether of  $\alpha$ -terpenyl as  
 an adjuvant in a scented cleaning composition  
 INVENTOR(S): Holzner, Guenter; Morris, Anthony Francis;  
 Rautenstrauch, Valentin; Thomas, Alan Francis  
 PATENT ASSIGNEE(S): Firmaenich S. A. , Switz.

March 24, 2009

10/559,779

19

SOURCE: Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 141266	A2	19850515	EP 1984-111620	198409 28
EP 141266	A3	19860319		
EP 141266	B1	19881207		
R: CH, DE, FR, GB, IT, LI, NL				
JP 60156467	A	19850816	JP 1984-217497	198410 18
PRIORITY APPLN. INFO.:			CH 1983-5730	A 198310 21

AB *α*-Terpenyl Me ether (I) [14576-08-0] facilitates the diffusion of the scenting ingredients through polymer membranes, in room deodorant/air-freshener packages. I is prepared by etherification of limonene [138-86-3], without prior purification, in citrus fruit exts. Thus, benzyl acetate [140-11-4] or linalyl acetate [115-95-7] were placed in plastic sachets, with or without I. In the presence of I, the diffusion rate of the acetates was higher than without I.

IC ICM A61L009-04  
 ICS A61L009-01  
 CC 62-5 (Essential Oils and Cosmetics)

=> d ibib abs hitstr hitind l17 1-17

L17 ANSWER 1 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2007:301793 HCPLUS Full-text  
 DOCUMENT NUMBER: 146:480660  
 TITLE: An improved enzymic process for the preparation of esters of organic acids and alcohols  
 INVENTOR(S): Divakar, Soundar; Kiran, Kondabagilu Rajanna; Harikrishna, Sajja; Karanth, Nayakanakatte Ganesh  
 PATENT ASSIGNEE(S): Council of Scientific and Industrial Research, India  
 SOURCE: Indian Pat. Appl., 15pp.  
 CODEN: INXXBQ  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 1999DE01244	A	20060127	IN 1999-DE1244	199909

16

PRIORITY APPLN. INFO.:

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IN 1999-DE1244199909  
16

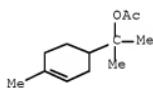
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OTHER SOURCE(S): CASREACT 146:480660

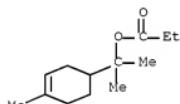
AB This invention relates to an improved process for the preparation of esters of organic acids and alcs. The process uses immobilized lipases in organic media. The reaction of primary and secondary alcs. of carbon atoms 1 to 20 with acids of carbon atoms 2 to 20 has been carried out in presence of immobilized lipase at 40-70 °C in presence of solvent for 12-80 h to obtain the desired product.

IT 80-26-2P,  $\alpha$ -Terpinyl acetate 80-27-3P,  
 $\alpha$ -Terpinyl propionate 2153-28-8P,  $\alpha$ -Terpinyl butyrate 7774-65-4P,  $\alpha$ -Terpinyl isobutyrate  
 RL: BMF (Bioindustrial manufacture); PUR (Purification or recovery);  
 BIOL (Biological study); PREP (Preparation)  
 (improved enzymic process for preparation of esters of organic acids and alcs.)

RN 80-26-2 HCPLUS

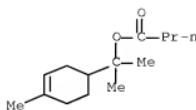
CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
 (CA INDEX NAME)

RN 80-27-3 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-propanoate  
 (CA INDEX NAME)

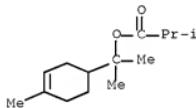
RN 2153-28-8 HCPLUS

CN Butanoic acid, 1-methyl-1-(4-methyl-3-cyclohexen-1-yl)ethyl ester  
 (CA INDEX NAME)



RN 7774-65-4 HCPLUS

CN Propanoic acid, 2-methyl-, 1-methyl-1-(4-methyl-3-cyclohexen-1-yl)ethyl ester (CA INDEX NAME)



IC ICM C12P007-62

CC 16-5 (Fermentation and Bioindustrial Chemistry)

IT Esterification  
(enzymic; improved enzymic process for preparation of esters of organic acids and alcs.)IT Fatty acids, preparation  
RL: BMF (Bioindustrial manufacture); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
(esters; improved enzymic process for preparation of esters of organic acids and alcs.)IT Enzymes, uses  
RL: BCP (Biochemical process); CAT (Catalyst use); BIOL (Biological study); PROC (Process); USES (Uses)  
(immobilized; improved enzymic process for preparation of esters of organic acids and alcs.)IT Distillation  
Drying agents  
Molecular sieves  
Solvent extraction  
Transesterification  
(improved enzymic process for preparation of esters of organic acids and alcs.)IT Ligoine  
Silica gel, processes  
RL: BCP (Biochemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)  
(improved enzymic process for preparation of esters of organic acids and alcs.)IT Alcohols, reactions  
RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)  
(improved enzymic process for preparation of esters of organic acids and alcs.)IT Fatty acids, reactions  
RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)

(improved enzymic process for preparation of esters of organic acids and alcs.)

IT Oligomers  
RL: BMF (Bioindustrial manufacture); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
(lactic acid; improved enzymic process for preparation of esters of organic acids and alcs.)

IT Adsorbents  
(polymeric; improved enzymic process for preparation of esters of organic acids and alcs.)

IT Separation  
(reflux; improved enzymic process for preparation of esters of organic acids and alcs.)

IT 9001-62-1, Lipase  
RL: BCP (Biochemical process); CAT (Catalyst use); BIOL (Biological study); PROC (Process); USES (Uses)  
(improved enzymic process for preparation of esters of organic acids and alcs.)

IT 60-29-7, Diethyl ether, processes 67-66-3, Chloroform, processes 75-09-2, Dichloromethane, processes 108-20-3, Diisopropyl ether 109-66-0, Pentane, processes 110-54-3, Hexane, processes 7487-88-9, Magnesium sulfate, processes 7757-82-6, Sodium sulfate, processes  
RL: BCP (Biochemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)  
(improved enzymic process for preparation of esters of organic acids and alcs.)

IT 50-21-5, Lactic acid, reactions 57-10-3, Palmitic acid, reactions 57-11-4, Stearic acid, reactions 64-17-5, Ethanol, reactions 64-19-7, Acetic acid, reactions 67-56-1, Methanol, reactions 67-63-0, Isopropanol, reactions 71-23-8, 1-Propanol, reactions 71-36-3, 1-Butanol, reactions 71-41-0, Amyl alcohol, reactions 77-92-9, Citric acid, reactions 79-09-4, Propionic acid, reactions 97-64-3, Ethyl lactate 98-55-5,  $\alpha$ -Terpineol 107-92-6, Butyric acid, reactions 108-24-7, Acetic anhydride 109-52-4, Valeric acid, reactions 112-53-8, Lauryl alcohol 112-80-1, Oleic acid, reactions 112-92-5, Stearyl alcohol 124-07-2, Octanoic acid, reactions 143-07-7, Lauric acid, reactions 334-48-5, Decanoic acid 503-74-2, Isovaleric acid 544-63-8, Myristic acid, reactions 6915-15-7, Malic acid 32665-23-9, Isopropyl isovalerate 36653-82-4, Palmityl alcohol  
RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)  
(improved enzymic process for preparation of esters of organic acids and alcs.)

IT 80-26-2P,  $\alpha$ -Terpinyl acetate 80-27-3P,  
 $\alpha$ -Terpinyl propionate 105-68-0P, Isoamyl propionate 2153-28-8P,  $\alpha$ -Terpinyl butyrate 7774-65-4P,  
 $\alpha$ -Terpinyl isobutyrate 7795-58-6P, Palmitoyl lactate  
RL: BMF (Bioindustrial manufacture); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
(improved enzymic process for preparation of esters of organic acids and alcs.)

IT 7732-18-5P, Water, preparation  
RL: BYP (Byproduct); REM (Removal or disposal); PREP (Preparation); PROC (Process)  
(improved enzymic process for preparation of esters of organic acids and alcs.)

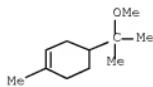
IT 79-31-2, Isobutyric acid 123-51-3, Isoamyl alcohol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (improved enzymic process for preparation of esters of organic  
 acids and alc.s.)

L17 ANSWER 2 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2006149906 HCPLUS Full-text  
 DOCUMENT NUMBER: 1441224087  
 TITLE: Release layer paste and method of  
 production of multilayer type electronic device  
 INVENTOR(S): Ishiyama, Tamotsu; Sato, Shigeki  
 PATENT ASSIGNEE(S): Tdk Corporation, Japan  
 SOURCE: U.S. Pat. Appl. Publ., 27 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060035071	A1	20060216	US 2005-200034	200508 10
JP 2006080496	A	20060323	JP 2005-228238	200508 05
TW 275110	B	20070301	TW 2005-94126949	200508 09
CN 1741212	A	20060301	CN 2005-10091161	200508 10
PRIORITY APPLN. INFO.:			JP 2004-233621	A 200408 10

AB A release layer paste used for producing a multilayer type electronic device, used in combination with an electrode layer paste including terpineol, dehydroterpineol, terpineol acetate, or dehydroterpineol acetate and including a ceramic powder, organic vehicle, plasticizer, and dispersion agent, the organic vehicle containing a binder having an acryl resin as its main ingredient, the acryl resin being comprised of a copolymer having acrylic acid ester monomer units and methacrylic acid ester monomer units as its main ingredients and having an acid value of 1 to 10 mgKOH/g, a ratio (P/B) of the ceramic powder and the binder and plasticizer being controlled to 0.67 to 5.56 (however, excluding 0.67 and 5.56).

IT 14576-08-0  
 RL: FMU (Formation, unclassified); PRP (Properties); TEM (Technical or engineered material use); FORM (Formation, nonpreparative); USES (Uses)  
 (release layer paste and electrode layer in production of multilayer type electronic device)  
 RN 14576-08-0 HCPLUS  
 CN Cyclohexene, 4-(1-methoxy-1-methylethyl)-1-methyl- (CA INDEX NAME)



INCL 428325000; 156089110; 156089120  
 CC 76-3 (Electric Phenomena)  
 IT Acrylic polymers, reactions  
 RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)  
 (release layer paste and electrode layer in production of multilayer type electronic device)  
 IT 125-12-2, Isobornyl acetate 536-59-4, Perillyl alcohol  
 8000-41-7, Terpineol 8007-35-0 14576-08-0 28982-60-7  
 58985-02-7, Dihydroterpineol 247074-38-0  
 RL: FMU (Formation, unclassified); PRP (Properties); TEM (Technical or engineered material use); FORM (Formation, nonpreparative); USES (Uses)  
 (release layer paste and electrode layer in production of multilayer type electronic device)

L17 ANSWER 3 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:902059 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 141:365629  
 TITLE: Feed additives against disease infection in terrestrial and aquatic animals  
 INVENTOR(S): Harel, Moti  
 PATENT ASSIGNEE(S): Advanced Bionutrition Corp., USA  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004091307	A2	20041028	WO 2004-US10892	20040408

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WO 2004091307 A3 20060908  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,  
 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,  
 KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
 MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,  
 SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
 VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,  
 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,  
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
 ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2003-460881P

P

200304  
08

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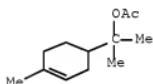
AB An animal feed additive, for aquatic or terrestrial animals, which has a primary composition and a secondary composition, both of which maintain their bioactivity during feed processing and storage. The compds. can be volatile or non-volatile. A method for feeding an aquatic or terrestrial animal a feed, which includes providing the animal with a feed additive with primary and secondary compns. that maintain bioactivity. The feed, and the method of feeding, protect the animal from disease.

IT 80-26-2

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(feed additives against disease infection in terrestrial and  
aquatic animals)

RN 80-26-2 HCAPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



IC ICM A23K

CC 18-6 (Animal Nutrition)

IT Phenols, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(polyphenols, nonpolymeric; feed additives against  
disease infection in terrestrial and aquatic animals)

IT 50-21-5, Lactic acid, biological studies 56-81-5, Glycerol,  
biological studies 57-55-6, Propylene glycol, biological studies  
62-54-4, Calcium acetate 64-17-5, Ethanol, biological studies  
64-18-6, Formic acid, biological studies 64-19-7, Acetic acid,  
biological studies 66-25-1, Hexanal 67-63-0, Isopropyl alcohol,  
biological studies 71-23-8, Propanol, biological studies  
71-36-3, n-Butyl alcohol, biological studies 71-41-0, n-Amyl  
alcohol, biological studies 75-07-0, Acetaldehyde, biological  
studies 76-22-2, Camphor 77-92-9, Citric acid, biological  
studies 78-70-6, Linalool 78-83-1, Isobutyl alcohol, biological  
studies 78-84-2 80-26-2 84-65-1D, Anthraquinone,  
derivatives. 87-44-5,  $\beta$ -Caryophyllene 87-69-4, Tartaric acid,  
biological studies 89-83-8, Thymol 90-64-2, Mandelic acid  
93-15-2, Methyleugenol 93-28-7, Acetyleneugenol 94-59-7, Safrol  
94-62-2, Piperin 94-86-0, Propenylguaiacol 97-53-0, Eugenol  
97-54-1, Isoeugenol 98-01-1, Furfurol, biological studies  
98-85-1,  $\alpha$ -Methylbenzyl alcohol 100-51-6, Benzyl alcohol,  
biological studies 100-52-7, Benzaldehyde, biological studies  
100-66-3, Anisole, biological studies 102-16-9, Benzyl phenyl  
acetate 103-45-7 103-54-8, Cinnamyl acetate 103-82-2,  
Phenylacetic acid, biological studies 104-46-1, Anethole  
104-53-0, Hydrocinnamic aldehyde 104-54-1, Cinnamyl alcohol  
104-55-2, Cinnamic aldehyde 105-13-5, Anisic alcohol 105-82-8,  
Acetaldehyde dipropyl acetal 105-87-3, Geranyl acetate 106-22-9,  
Citronellol 106-23-0, Citronellal 106-24-1, Geraniol

106-51-4D, 2,5-Cyclohexadiene-1,4-dione, derivs. 108-95-2, Phenol, biological studies 109-52-4, Valeric acid, biological studies 110-17-8, Fumaric acid, biological studies 111-27-3, Hexyl alcohol, biological studies 111-70-6, Heptyl alcohol 111-71-7, Heptyl aldehyde 111-87-5, Octyl alcohol, biological studies 112-05-0, Pelargonic acid 112-14-1, Octyl acetate 112-30-1, n-Decyl alcohol 112-31-2, n-Decanal 112-43-6, 10-Undecen-1-ol 112-53-8, Lauryl alcohol 112-54-9, Lauryl aldehyde 115-95-7, Linanyl acetate 120-57-0, Heliotropin 121-32-4, Ethyl vanillin 121-33-5, Vanillin 122-03-2, Cuminaldehyde 122-59-8, Phenoxyacetic acid 122-72-5, Hydrocinnamyl acetate 122-78-1, Phenylacetaldehyde 123-11-5, Anisic aldehyde, biological studies 123-38-6, Propanal, biological studies 123-51-3, Isoamyl alcohol 123-86-4, n-Butyl acetate 123-92-2, Isoamyl acetate 124-04-9, Adipic acid, biological studies 124-13-0, Octyl aldehyde 124-19-6, Nonyl aldehyde 126-96-5, Sodium diacetate 127-08-2, Potassium acetate 127-09-3, Sodium acetate 130-15-4D, 1,4-Naphthalenedione, derivs. 138-86-3, Limonene 140-11-4, Benzyl acetate 140-67-0, Methylchavicol 141-78-6, Ethyl acetate, biological studies 142-50-7, Nerolidol 142-62-1, Capronic acid, biological studies 142-92-7, Hexyl acetate 143-08-8, Nonyl alcohol 150-84-5, Citronellyl acetate 470-82-6, Eucalyptol 480-18-2, Taxifolin 480-20-6, Aromadendrine 499-12-7, Aconitic acid 499-75-2, Carvacrol 501-52-0, Hydrocinnamic acid 503-74-2, Isovaleric acid 505-57-7, 2-Hexenal 507-70-0, Borneol 513-86-0, Acetoin 515-69-5,  $\alpha$ -Bisabolol 536-60-7, Cuminal alcohol 539-86-6, Allicin 544-12-7, 3-Hexen-1-ol 621-82-9, Cinnamic acid, biological studies 871-22-7, Acetaldehyde dibutyl acetal 2111-75-3, Perillaldehyde 2216-51-5 2568-25-4, Benzaldehyde propylene glycol acetal 4299-57-4, Plastoquinone 4707-32-8,  $\beta$ -Lapachone 4707-32-8D, derivs. 5392-40-5, Citral 5660-60-6 6812-78-8, Rhodinol 6915-15-7, Malic acid 7493-57-4, Acetaldehyde phenethyl propyl acetal 7779-41-1, Decanal dimethyl acetal 8000-41-7, Terpineol 9000-92-4, Amylase 9001-62-1, Lipase 9005-25-8, Hylon V, biological studies 9005-32-7, Alginic acid 9005-82-7, Amylose 10032-05-0, Heptanal dimethyl acetal 32619-42-4, Oleuropein 36653-82-4, 1-Hexadecanol 72854-42-3 183256-98-6, Fornesol 186209-48-3, Nonadienol 780768-98-1, Aquo Savor

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (feed additives against disease infection in terrestrial and aquatic animals)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:13190 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 140:234613  
 TITLE: Changes in quality of green pepper (*Piper nigrum* L.) during curing  
 AUTHOR(S): Menon, A. Nirmala; Chacko, Susan  
 CORPORATE SOURCE: Regional Research Laboratory, Trivandrum, 695019, India  
 SOURCE: Indian Perfumer (2003), 47(3), 259-263  
 CODEN: IPERAS; ISSN: 0019-607X  
 PUBLISHER: Essential Oil Association of India  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

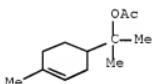
AB It was observed that piperine and volatile oil content declined from 7.7% to 4.9% and 5.2% to 3.5% resp. over a period of 6 mo during curing of green pepper. Chemical composition of the volatile oil varied considerably between terpene hydrocarbons and oxygenated compds. due to the acidic environment of the medium.

IT 80-26-2,  $\alpha$ -Terpinyl acetate

RL: BSU (Biological study, unclassified); BIOL (Biological study (essential oil components during curing of green pepper)

RN 80-26-2 HCAPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha, \alpha, 4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



CC 17-6 (Food and Feed Chemistry)

IT Flavor

Food processing

Piper nigrum

(essential oil components during curing of green pepper)

IT Phenols, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study (polyphenols, nonpolymeric; essential oil components during curing of green pepper)

IT 77-53-2, Cedrol 78-70-6, Linalool 79-92-5, Camphene

80-26-2,  $\alpha$ -Terpinyl acetate 80-56-8,  $\alpha$ -Pinene

87-44-5,  $\beta$ -Caryophyllene 89-81-6, Piperitone 94-62-2,

Piperine 98-55-5,  $\alpha$ -Terpineol 99-49-0, Carvone 99-85-4,

$\gamma$ -Terpinene 105-87-3, Geranyl acetate 106-22-9,

Citronellol 106-24-1, Geraniol 127-91-3,  $\beta$ -Pinene

138-86-3, Limonene 138-87-4, p-Menth-8-en-1-ol 141-12-8,

Nerylacetate 471-16-9, Sabinol 473-15-4,  $\beta$ -Eudesmol

481-34-5,  $\alpha$ -Cadinol 483-76-1,  $\delta$ -Cadinene 495-62-5,

Bisabolol 502-61-4,  $\alpha$ -Farnesene 507-70-0, Borneol

515-00-4, Myrtenol 515-13-9,  $\beta$ -Elemene 515-69-5, Bisabolol

555-10-2,  $\beta$ -Phellandrene 562-74-3, Terpinen-4-ol 586-62-9,

Terpinolene 639-99-6, Elemol 1139-30-6, Caryophyllene oxide

1365-19-1, Linalool oxide 2867-05-2,  $\alpha$ -Thujene 3691-11-0,

$\delta$ -Guaiene 3691-12-1,  $\alpha$ -Guaiene 3790-71-4,

cis,trans-Farnesol 3790-78-1 3856-25-5,  $\alpha$ -Copaene

6753-98-6,  $\alpha$ -Humulene 7212-40-0, cis-p-Menth 2,8, diene-1-ol

7632-16-8, cis-Carveol 13466-78-9 13877-91-3,  $\beta$ -Ocimene

16106-95-9, cis,cis-Farnesol 16982-00-6, Cuparene 17066-67-0,

$\beta$ -Selinene 17699-14-8,  $\alpha$ -Cubebene 19912-62-0

20085-19-2,  $\alpha$ -Amorphene 20307-84-0,  $\delta$ -Elemene

24268-39-1 29803-81-4, cis-p-Menth-2-en-1-ol 29803-82-5,

trans-p-Menth-2-en-1-ol 33204-74-9 38049-26-2, Dihydrocarveol

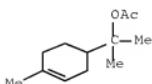
40716-66-3 56747-96-7, Caryophyllene alcohol 114791-16-1,

Cadina-1,4-dien-3-ol

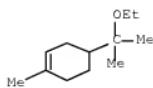
RL: BSU (Biological study, unclassified); BIOL (Biological study (essential oil components during curing of green pepper)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2002:899191 HCPLUS Full-text  
 DOCUMENT NUMBER: 138:336820  
 TITLE: Analytical characterization of myrtle berries,  
 partially processed products and  
 commercially available liqueurs  
 AUTHOR(S): Franco, Mario Andrea; Versini, Giuseppe;  
 Mattivi, Fulvio; Dalla Serra, Anita; Vacca,  
 Vincenzo; Manca, Gavina  
 CORPORATE SOURCE: Dip. Chimica, Univ. degli Studi di Sassari,  
 Sassari, 07100, Italy  
 SOURCE: Journal of Commodity Science (2002),  
 41(3), 143-267  
 CODEN: RIMEDE; ISSN: 0392-064X  
 PUBLISHER: Cooperativa Libraria Universitaria Editrice  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Characterization of the chemical and technol. variables of the liqueur "Mirto di Sardegna Tradizionale" revealed the complexity of the product. The study concerned the myrtle (*Myrtus communis*) berries, the partially processed product, and the com. available liqueur made from them. The contents of alc., net dry matter, total sugars, reducing sugars, total acidity, ash, total polyphenols, vanillin index, proanthocyanidins, free anthocyanins, flavonols, organic acids, cations, anions, myo-inositol, volatile compds., the <sup>13</sup>C/<sup>12</sup>C isotopic ratio in some constituents, amino acids, and total nitrogen were determined. Particular attention was paid to the method of extraction of the main components of the raw material (berries gathered from plants growing wild in Sardinia), depending on different technol. procedures used by the most important distillers in Sardinia. Chemical changes during the preliminary process stages (dilution to reach the desired alc. content, filtration, addition of sugar), characterization of the final product, and composition differences from other products made from aromatic compds. with possible addition of other substances were also examined. The results were used to draft preliminary production regulations to safeguard the authenticity of this typical traditional Sardinian product, with proposals for a series of indicators to be used in routine or detailed quality control and inspections.  
 IT 80-26-2 27153-54-4  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (myrtle berries, partially processed products and com.  
 available liqueurs from Sardinia and their chemical composition)  
 RN 80-26-2 HCPLUS  
 CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
 (CA INDEX NAME)



RN 27153-54-4 HCPLUS  
 CN Cyclohexene, 4-(1-ethoxy-1-methylethyl)-1-methyl- (CA INDEX NAME)



CC 17-10 (Food and Feed Chemistry)  
 ST myrtle berry processing liquor chem compn  
 IT Flavones  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
     (hydroxy; myrtle berries, partially processed products  
     and com. available liqueurs from Sardinia and their chemical composition)  
 IT Alcoholic beverages  
     (liqueurs; myrtle berries, partially processed products  
     and com. available liqueurs from Sardinia and their chemical composition)  
 IT Volatile substances  
     (myrtle berries, partially processed products and com.  
     available liqueurs from Sardinia and their chemical composition)  
 IT Amino acids, biological studies  
 Anthocyanins  
 Carbohydrates, biological studies  
 Carboxylic acids, biological studies  
 Mineral elements, biological studies  
 Monoterpene  
 Proanthocyanidins  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
     (myrtle berries, partially processed products and com.  
     available liqueurs from Sardinia and their chemical composition)  
 IT Myrtus communis  
     (myrtle berries, partially processed products and com.  
     available liquors from Sardinia and their chemical composition)  
 IT Phenols, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
     (polyphenols, nonpolymeric; myrtle berries, partially  
     processed products and com. available liqueurs from  
     Sardinia and their chemical composition)  
 IT Carbohydrates, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
     (reducing sugars; myrtle berries, partially processed  
     products and com. available liqueurs from Sardinia and their  
     chemical composition)  
 IT 51-35-4 56-12-2, Gaba, biological studies 56-40-6, Glycine,  
 biological studies 56-41-7, L-Alanine, biological studies  
 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid,  
 biological studies 56-85-9, L-Glutamine, biological studies  
 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine,  
 biological studies 56-89-3, Cystine, biological studies 57-13-6,  
 Urea, biological studies 60-12-8,  $\beta$  Phenylethanol 60-18-4,  
 L-Tyrosine, biological studies 61-90-5, Leu, biological studies  
 63-68-3, L-Methionine, biological studies 63-91-2,  
 L-Phenylalanine, biological studies 64-17-5, Ethanol, biological  
 studies 70-26-8, L-Ornithine 70-47-3, Asn, biological studies  
 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine,  
 biological studies 72-19-5, L-Threonine, biological studies  
 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine,

biological studies 77-92-9, Citric acid, biological studies  
 77-95-2, Quinic acid 78-70-6, Linalool 80-26-2  
 80-56-8, *α* Pinene 87-44-5, trans-Caryophyllene 87-69-4,  
 Tartaric acid, biological studies 87-89-8, myo-Inositol 89-80-5,  
 p-Menthone 89-82-7, Pulegone 93-15-2, Eugenol methyl ether  
 97-85-8, Isobutyl isobutyrate 98-55-5, *α* Terpineol  
 99-48-9, Carveol 99-83-2, *α* Phellandrene 99-85-4,  $\gamma$   
 Terpinene 99-87-6 100-51-6, Benzyl alcohol, biological studies  
 103-73-1 104-46-1 105-53-3, Diethyl malonate 105-87-3, Geranyl  
 acetate 106-24-1, Geraniol 106-25-2, Nerol 107-35-7, Taurine  
 107-97-1, Sarcosine 111-62-6, Ethyl oleate 112-31-2, Decanal  
 115-95-7, Linalyl acetate 117-39-5, Quercetin 121-33-5, Vanillin  
 123-51-3, Isoamyl alcohol 127-91-3,  $\beta$  Pinene 138-86-3,  
 Limonene 140-67-0 141-05-9, Diethyl maleate 141-12-8, Neryl  
 acetate 141-43-5, Ethanolamine, biological studies 141-82-2,  
 Malonic acid, biological studies 147-85-3, Proline, biological  
 studies 372-75-8 470-82-6, 1,8-Cineol 471-84-1, *α*  
 Fenchene 473-13-2, *α* Selinene 491-07-6,  
*α*-Isomenthone 495-62-5, Bisabolene 507-70-0, Borneol  
 515-00-4, Myrtenol 520-18-3, Kaempferol 526-95-4, Gluconic acid  
 529-44-2, Myricetin 544-35-4, Ethyl linoleate 562-74-3,  
 Terpinen-4-ol 586-62-9 589-59-3, Isobutyl isovalerate  
 628-97-7, Ethyl palmitate 659-70-1, Isoamyl isovalerate  
 1071-23-4, Phosphethanolamine 1079-01-2, Myrtenyl acetate  
 1191-41-9, Ethyl linolenate 1197-01-9, *p*-Cymen-8-ol 1490-04-6,  
 Menthol 1632-73-1, Fenchyl alcohol 1674-08-4, trans-Pinocarveol  
 1686-15-3, trans-Pinocarvyl acetate 5951-67-7, *α* Elemene  
 6753-98-6, *α* Humulene 6906-38-3, Delphinidin 3 monoglucoside  
 6906-39-4, Peonidin 3 monoglucoside 6915-15-7, Malic acid  
 6988-81-4, Petunidin 3 monoglucoside 7084-24-4, Cyanidin 3  
 monoglucoside 7228-78-6, Malvidin 3 monoglucoside 7439-95-4,  
 Magnesium, biological studies 7440-09-7, Potassium, biological  
 studies 7440-23-5, Sodium, biological studies 7440-70-2,  
 Calcium, biological studies 7664-41-7, Ammonia, biological studies  
 13466-78-9,  $\Delta_3$  Carene 13877-91-3,  
 3,7-Dimethyl-1,3,6-octatriene 14265-44-2, Phosphate, biological  
 studies 14762-74-4, Carbon 13, biological studies 14808-79-8,  
 Sulfate, biological studies 16409-45-3, Menthyl acetate  
 16887-00-6, Chloride, biological studies 17066-67-0,  $\beta$   
*Selinene* 26444-18-8 27153-54-4 27400-71-1, *cis*-Ocimene  
 29210-77-3, 3,7-Dimethyl-1-octene-3,7-diol 34693-53-3 38223-63-1  
 42370-41-2, trans-Sobrerol 53833-85-5, Sabinal acetate  
 56767-16-9 60047-17-8 68279-51-6, 8-Ethoxy-*p*-cymene 72845-33-1  
 82968-92-1

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (myrtle berries, partially processed products and com.  
 available liqueurs from Sardinia and their chemical composition)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L17 ANSWER 6 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2002:102246 HCPLUS Full-text  
 DOCUMENT NUMBER: 136:172497  
 TITLE: Skin deodorizing and sanitizing compositions  
 comprising antiseptics  
 INVENTOR(S): Dodd, Michael Thomas; Wei, Karl Shiqing; Trinh,  
 Toan; Sine, Mark Richard; Bartolo, Robert

PATENT ASSIGNEE(S): Gregory; Jakubovic, David Andrew  
 SOURCE: The Procter & Gamble Company, USA  
 U.S., 18 pp., Cont.-in-part of U.S. Ser. No.  
 197,933, abandoned.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6344218	B1	20020205	US 1999-321292	199905 27
US 20020176879	A1	20021128	US 1999-443420	199911 19
US 6656456	B2	20031202		<--
WO 2000030599	A1	20000602	WO 1999-US27684	199911 22
WO 2000030600	A1	20000602	WO 1999-US27685	199911 22
WO 2000030601	A1	20000602	WO 1999-US27688	199911 22
EP 1131044	A1	20010912	EP 1999-962825	199911 22
EP 1131045	A1	20010912	EP 1999-962826	199911 22
EP 1133274	A1	20010919	EP 1999-962827	199911 22
EP 1133274	B1	20081001		<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, FI, CY  
 JP 2002530313 T 20020917 JP 2000-583484 199911  
 22

JP 2002530314 T 20020917 JP 2000-583486 199911  
 22

JP 2003526611 T 20030909 JP 2000-583485 199911  
 22

CN 1167407 C 20040922 CN 1999-813595 199911  
 22

AT 409496 T 20081015 AT 1999-962827 199911  
 22

PRIORITY APPLN. INFO.: US 1998-197933 B2 199811  
 23

US 1998-109500P P 199811  
 23

US 1998-109602P P 199811  
 23

US 1999-321292 A1 199905  
 27

WO 1999-US27684 W 199911  
 22

WO 1999-US27685 W 199911  
 22

WO 1999-US27688 W 199911  
 22

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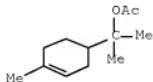
OTHER SOURCE(S): MARPAT 136:172497

AB The present invention relates to aqueous compns. comprising an odor controlling agent and select sanitizing agents for deodorizing and sanitizing skin surfaces. Articles of manufacture and methods of deodorizing and sanitizing the skin using disclosed compns. are also disclosed. A sanitizing and deodorizing spray contained ethanol 40, water 54.8, isopropanol (99%) 3, hydroxypropyl beta-cyclodextrin 1, zinc chloride 1, and benzalkonium chloride 0.2%.

IT 80-26-2

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(skin deodorizing and sanitizing compns. comprising antiseptics)  
 RN 80-26-2 HCAPLUS  
 CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
 (CA INDEX NAME)



IC ICM A61K007-32  
 ICS A61L009-015; A61L009-02; A61L009-14  
 INCL 424605000  
 CC 62-4 (Essential Oils and Cosmetics)  
 IT Vinyl compounds, biological studies  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (carboxy-containing, polymers; skin deodorizing and  
 sanitizing compns. comprising antiseptics)  
 IT 60-12-8, Phenyl ethyl alcohol 64-17-5, Ethanol, biological studies  
 67-63-0, Isopropanol, biological studies 71-23-8, n-Propanol,  
 biological studies 76-22-2, Camphor 77-83-8, Ethyl methylphenyl  
 glycidate 78-70-6, Linalool 79-77-6,  $\beta$ -Ionone  
 80-26-2 80-54-6, Lilial 81-14-1, Musk ketone 85-91-6,  
 Methyl-N-methyl anthranilate 87-25-2, Ethyl anthranilate  
 89-78-1, Menthol 89-79-2, Isopulegol 89-80-5, Menthone  
 89-82-7, Pulegone 91-16-7, Veratrol 91-64-5, Coumarin 93-04-9,  
 2-Methoxy naphthalene 93-08-3 93-15-2, Eugenyl methyl ether  
 93-28-7, Eugenyl acetate 93-29-8, Isoeugenyl acetate 93-58-3,  
 Methyl benzoate 93-89-0, Ethyl benzoate 94-59-7, Safrole  
 97-53-0, Eugenol 97-54-1, Isoeugenol 100-06-1 100-51-6, Benzyl  
 alcohol, biological studies 100-52-7, Benzaldehyde, biological  
 studies 100-66-3, Anisole, biological studies 100-86-7, Dimethyl  
 benzyl carbinol 101-97-3, Ethyl phenyl acetate 103-05-9, Phenyl  
 ethyl dimethyl carbinol 103-26-4, Methyl cinnamate 103-36-6,  
 Ethyl cinnamate 103-38-8, Benzyl iso valerate 103-45-7  
 103-54-8, Cinnamyl acetate 103-56-0, Cinnamyl propionate  
 103-95-7, Cymal 104-46-1, Anethole 104-50-7 104-54-1, Cinnamic  
 alcohol 104-57-4, Benzyl formate 104-61-0 104-65-4, Cinnamyl  
 formate 104-67-6,  $\gamma$ -Undecalactone 104-93-8 105-54-4,  
 Ethyl butyrate 105-66-8, Propyl butyrate 105-86-2, Geranyl  
 formate 106-22-9, Citronellol 106-24-1, Geraniol 106-25-2,  
 Nerol 106-26-3, Neral 106-44-5, biological studies 106-68-3,  
 Ethyl amyl ketone 107-75-5, Hydroxycitronellal 110-43-0, Methyl  
 amyl ketone 111-01-3, Perhydroxqualene 111-13-7, Methyl hexyl  
 ketone 111-87-5, Octyl alcohol, biological studies 112-12-9,  
 Methyl nonyl ketone 112-45-8, Undecylenic aldehyde 115-95-7,  
 Linalyl acetate 115-99-1, Linalyl formate 118-58-1, Benzyl  
 salicylate 118-61-6, Ethyl salicylate 119-36-8, Methyl  
 salicylate 119-61-9, Benzophenone, biological studies 119-65-3,  
 Isoquinoline 120-50-3, Isobutyl benzoate 120-57-0, Heliotropin  
 120-72-9, Indole, biological studies 121-32-4, Ethyl vanillin  
 121-33-5, Vanillin 122-00-9, P-Methyl acetophenone 122-03-2,  
 Cumaric aldehyde 122-63-4, Benzyl propionate 122-78-1, Phenyl  
 acetaldehyde 122-99-6, Phenoxy ethanol 123-11-5, Anisic  
 aldehyde, biological studies 123-51-3, Isoamyl alcohol 123-68-2,

Allyl caproate 123-96-6, 2-Octanol 125-12-2, Isobornyl acetate 127-41-3,  $\alpha$ -Ionone 127-51-5,  $\alpha$ -Isomethylionone 134-20-3, Methyl anthranilate 140-11-4, Benzyl acetate 140-67-0, Methyl chavicol 141-78-6, Ethyl acetate, biological studies 141-97-9, Ethyl aceto acetate 142-19-8, Allyl heptoate 142-92-7, Hexyl acetate 151-05-3, Dimethyl benzyl carbinal acetate 409-02-9, Methyl heptenone 470-82-6, Eucalyptol 479-61-8 488-10-8, *cis*-Jasmone 491-07-6, Isomethone 499-44-5, Hinokitiol 499-75-2, Carvacrol 527-09-3, Copper gluconate 536-60-7, Cuminic alcohol 624-54-4, Amyl propionate 628-63-7, Amyl acetate 629-33-4, Hexyl formate 774-48-1 821-55-6, Methyl heptyl ketone 925-78-0, Ethyl hexyl ketone 1009-11-6 1123-85-9, Hydratropic alcohol 1191-16-8, Prenyl acetate 1305-78-8, Calcium oxide, biological studies 1318-00-9, Vermiculite 1318-74-7, Kaolinite, biological studies 1318-93-0, Montmorillonite, biological studies 1331-83-5, Anisyl acetate 1335-66-6, Iso cyclo citral 1365-19-1, Linalool oxide 1393-70-0, Cerasin, 1398-61-4, Chitin 1490-04-6, Menthol 1632-73-1, Fenchyl alcohol 2049-96-9, Amyl benzoate 2244-16-8 2305-05-7,  $\gamma$ -Dodecalactone 2305-21-7, 2-Hexen-1-ol 2430-16-2, Benzenehexanol 2550-26-7, Benzyl acetone 2630-39-9, Methyl dihydrojasmonate 2785-87-7, Dihydroeugenol 3306-52-3, Viridine 3623-52-7, Isomenthol 3681-71-8, *cis*-3-Hexenyl acetate 3812-32-6, Carbonate, biological studies 4395-92-0, *p*-Iso-propyl phenylacetaldehyde 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 5146-66-7, Geranyl nitrile 5392-40-5, Citral 5538-94-3, Dioctyldimethylammonium chloride 5739-17-3, Dihydro isojasmonate 6413-10-1, Fructone 6485-40-1, L-Carvone 6790-58-5, Ambrox 7173-51-5, Didecyldimethylammonium chloride 7440-50-8D, Copper, salts 7440-66-6D, Zinc, salts 7447-39-4, Copper chloride, biological studies 7452-79-1, Ethyl-2-methyl butyrate 7585-39-9,  $\beta$  Cyclodextrin 7631-86-9, Silica, biological studies 7646-85-7, Zinc chloride, biological studies 7722-64-7, Potassium permanganate 7733-02-0, Zinc sulfate 7756-96-9, Butyl anthranilate 7779-94-4, Hydroxycitronellal diethyl acetal 8000-41-7, Terpineol 8006-28-8, Soda lime 9000-30-0, Guar gum 9000-30-0D, Guar, cationic 9000-65-1, Tragacanth gum 9002-85-1, Polyvinylidene chloride 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9002-89-5 9003-01-4, Polyacrylic acid 9003-01-4D, Polyacrylic acid, crosslinked 9003-20-7, Polyvinyl acetate 9003-39-8, Polyvinylpyrrolidone 9004-32-4 9004-34-6D, Cellulose, cationic, biological studies 9004-62-0, Hydroxyethyl cellulose 9004-65-3, Hydroxy propylmethyl cellulose 9004-67-5, Methyl cellulose 9004-73-3, Polymethylsilsloxane 9005-12-3, Methylphenylpolysilsloxane 9005-25-8, Starch, biological studies 9005-38-3, Sodium alginate 9006-65-9, Dimethicone 10016-20-3,  $\alpha$  Cyclodextrin 10031-96-6, Eugenyl formate 11138-66-2, Xanthan gum 12068-50-7, Halloysite 12172-85-9, Beidellite 12173-47-6, Hectorite 12173-60-3, Illite 12174-06-0, Nontronite 12174-11-7, Palygorskite 12619-70-4, Cyclodextrin 12619-70-4D, Cyclodextrin, alkyl derivs. 13851-11-1, Fenchyl acetate 16039-53-5, Zinc lactate 16283-36-6, Zinc salicylate 16409-43-1, Rose oxide 16409-45-3, Menthyl acetate 17465-86-0,  $\gamma$  Cyclodextrin 18652-49-8 21722-83-8, Cyclohexyl ethyl acetate 23495-12-7, Phenoxyethyl propionate 23726-93-4, Damascenone 25087-26-7, Polymethacrylic acid 26444-19-9, Methyl acetophenone 27458-94-2, Isononyl alcohol 28219-61-6, Bacdonol 28261-03-2, Hexenol 28933-77-9, Hexenyl acetate 30385-25-2, Dihydro myrcenol 30390-50-2, 4-Decenal 30676-70-1 39421-75-5, Hydroxypropyl guar

gum 41847-88-5 43052-87-5,  $\alpha$ -Damascone 51566-62-2,  
 Citronellyl nitrile 54140-14-6 57576-09-7, Isopulegyl acetate  
 63800-37-3, Sepiolite 65405-73-4, Geranyl oxyacetaldehyde  
 65405-77-8, cis-3-Hexenyl salicylate 65560-17-0D, N-substituted  
 66732-77-2, Saponite 67801-20-1, Ebanol 68039-49-6, Cyclal C  
 76842-49-4, Frutene 87061-04-9, 3-1-Methoxy propane-1,2-diol  
 106392-12-5, Ethylene oxide propylene oxide block copolymer  
 124899-75-8 125109-85-5, Florhydrat 130066-44-3, Lyral  
 138757-67-2, Carbopol 980 171102-41-3 193980-63-1, Cetalox  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (skin deodorizing and sanitizing compns. comprising antiseptics)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L17 ANSWER 7 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2001:28645 HCPLUS Full-text  
 DOCUMENT NUMBER: 134:102570  
 TITLE: Process for producing particles of  
 amine reaction product  
 INVENTOR(S): Busch, Alfred; Smets, Johan  
 PATENT ASSIGNEE(S): Procter and Gamble Company, USA  
 SOURCE: Eur. Pat. Appl., 53 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1067174	A1	20010110	EP 1999-870147	199907 08 ---
EP 1067174	B1	20040929		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 277999	T	20041015	AT 1999-870147	199907 08 ---
WO 2001004248	A1	20010118	WO 2000-US18561	200007 06 ---
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2003504488	T	20030204	JP 2001-509452	200007 06 ---

US 6764986

B1

20040720

US 2001-19177

200112  
21

MX 2002000338

A

20020621

MX 2002-338

200201  
08

PRIORITY APPLN. INFO.:

EP 1999-870147

A

199907  
08

WO 2000-US18561

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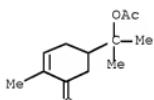
AB A process for making particles of amine reaction product of a compound containing a primary and/or secondary amine functional group and an active ketone or aldehyde containing component comprises the steps of: (a) providing an amine reaction product, and (b) mixing therewith an acid carrier. Processed amine reaction products and finished compns. incorporating such processed product are also herein provided.

IT 87578-93-6DP, reaction products with amines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reaction products with amines; process for producing particles of amine reaction product)

RN 87578-93-6 HCAPLUS

CN 2-Cyclohexen-1-one, 5-[1-(acetoxy)-1-methylethyl]-2-methyl- (CA INDEX NAME)



IC ICM C11D003-00

ICS C11D003-30; C11D003-37; C11D003-33; C11D003-50; C11D017-06;  
C11D003-02; C11D017-00; C11D007-08; C11D007-32

CC 46-6 (Surface Active Agents and Detergents)

IT Aldehydes, uses

Ketones, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(active, reaction products with amines; process for producing particles of amine reaction product)

IT Dendritic polymers

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(amino, reaction products with active ketone or aldehyde containing component; process for producing particles of amine reaction product)

IT Polyamides, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered

material use); PREP (Preparation); USES (Uses)  
(poly(amino acids), reaction products with active ketone or  
aldehyde containing component; process for producing  
particles of amine reaction product)

IT Amines, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(polyamines, nonpolymeric, reaction products with  
active ketone or aldehyde containing component; process for  
producing particles of amine reaction product)

IT Cleaning  
Laundering  
(process for producing particles of amine reaction  
product)

IT Amides, uses  
Amines, uses  
Amino acids, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(reaction products with active ketone or aldehyde containing  
component; process for producing particles of amine  
reaction product)

IT Antimicrobial agents  
Insect repellents  
Mothproofing agents  
(reaction products with amines; process for producing  
particles of amine reaction product)

IT 94-09-7DP, Ethyl-4-amino benzoate, reaction products with active  
ketone or aldehyde containing component 4605-14-5DP,  
N,N'-Bis (3-aminopropyl)-1,3-propanediamine, reaction products with  
active ketone or aldehyde containing component 7209-38-3DP,  
1,4-Bis-(3-aminopropyl) piperazine, reaction products with active  
ketone or aldehyde containing component 9002-89-5DP, Polyvinylalcohol,  
amino, reaction products with active ketone or aldehyde containing  
component 9002-98-6DP, LupasolHF, reaction products with Damascone  
9002-98-6DP, reaction products with active ketone or aldehyde containing  
component 25104-18-1DP, Polylysine, reaction products with active  
ketone or aldehyde containing component 26336-38-9DP, Polyvinylamine,  
reaction products with active ketone or aldehyde containing component  
38000-06-5DP, Polylysine, reaction products with active ketone or  
aldehyde containing component 43052-87-5DP,  $\alpha$ -Damascone,  
reaction products with Damascone 57378-68-4DP,  $\delta$ -Damascone,  
reaction products with Lupasol HF  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(process for producing particles of amine reaction  
product)

IT 488-43-7DP, Glucamine, reaction products with active ketone or  
aldehyde containing component  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(reaction products with active ketone or aldehyde containing  
component; process for producing particles of amine  
reaction product)

IT 80-54-6DP, Lilial, reaction products with amines 99-49-0DP,  
Carvone, reaction products with amines 104-55-2DP, Cinnamaldehyde,  
reaction products with amines 106-23-0DP, Citronellal, reaction  
products with amines 111-30-8DP, Glutaraldehyde, reaction products  
with amines 120-57-0DP, Heliotropine, reaction products with  
amines 134-62-3DP, N,N-Diethyl m-toluamide, reaction products with

amines 5392-40-5DP, Citral, reaction products with amines 7388-22-9DP,  $\gamma$ -Methyl-ionone, reaction products with amines 18829-56-6DP, trans-2-Nonenal, reaction products with amines 23726-93-4DP, Damascenone, reaction products with amines 24851-98-7DP, Hedione, reaction products with amines 43052-87-5DP,  $\alpha$ -Damascone, reaction products with amines 57378-68-4DP,  $\delta$ -Damascone, reaction products with amines 64274-27-7DP, Rotundial, reaction products with amines 68039-49-6DP, reaction products with amines 87578-93-6DP, Florhydral, reaction products with amines 125109-85-5DP, RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (reaction products with amines; process for producing particles of amine reaction product)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 8 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2001:28644 HCPLUS Full-text  
 DOCUMENT NUMBER: 134:102569  
 TITLE: Process for producing particles of amine reaction product  
 INVENTOR(S): Busch, Alfred; Smets, Johan; Homble, Marcel; Trujillo, Rafael; Laudamiel, Christophe; Wevers, Jean  
 PATENT ASSIGNEE(S): Procter and Gamble Company, USA  
 SOURCE: Eur. Pat. Appl., 53 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1067173	A1	20010110	EP 1999-870146	199907 08

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO  
 WO 2001004247 A1 20010118 WO 2000-US18468

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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 JP 2003504350 T 20030204 JP 2001-509451

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US 6740713	B1	20040525	US 2001-19178	<-- 200112 21
MX 2002000337	A	20020621	MX 2002-337	<-- 200201 08
PRIORITY APPLN. INFO.:			EP 1999-870146	<-- A 199907 08
			WO 2000-US18468	<-- W 200007 06

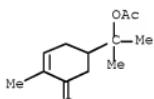
AB There is provided a process for producing particles of amine reaction product by means of a carrier having a m.p. of less than 30°C, optionally followed by a coating step. Processed amine reaction products and finished compns. incorporating such processed product are also herein provided.

IT 87578-93-6D, reaction products with amines

RL: TEM (Technical or engineered material use); USES (Uses)  
(process for producing particles of amine reaction product)

RN 87578-93-6 HCAPLUS

CN 2-Cyclohexen-1-one, 5-[1-(acetyloxy)-1-methylethyl]-2-methyl- (CA INDEX NAME)



IC ICM C11D003-00  
ICS C11D003-20; C11D003-30; C11D003-22; C11D003-37; C11D003-33;  
C11D003-50; C11D017-06

CC 46-6 (Surface Active Agents and Detergents)

IT Aldehydes, uses

Ketones, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(active, reaction products with amines; process for  
producing particles of amine reaction product)

IT Dendritic polymers

RL: TEM (Technical or engineered material use); USES (Uses)  
(amino, reaction products with active ketone or aldehyde containing  
component; process for producing particles of amine  
reaction product)

IT Detergents

(hard surface; process for producing particles of amine  
reaction product)

IT Detergents

(laundry; process for producing particles of amine  
reaction product)

IT Polyamides, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(poly(amino acids), reaction products with active ketone or  
aldehyde containing component; process for producing  
particles of amine reaction product)

IT Amines, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyamines, nonpolymeric, reaction products with  
active ketone or aldehyde containing component; process for  
producing particles of amine reaction product)

IT Amides, uses  
Amines, uses  
Amino acids, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reaction products with active ketone or aldehyde containing  
component; process for producing particles of amine  
reaction product)

IT Antimicrobial agents  
Insect repellents  
Mothproofing agents  
(reaction products with amines; process for producing  
particles of amine reaction product)

IT 94-09-7DP, Ethyl 4-aminobenzoate, reaction products  
2,4-dimethyl-3-cyclohexen-1-carboxaldehyde 9002-98-6DP, Lupasol  
G35, reaction products with Damascone 43052-87-5DP,  
 $\alpha$ -Damascone, reaction products with Lupasol G35  
57378-68-4DP,  $\delta$ -Damascone, reaction products with Lupasol HF  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(process for producing particles of amine reaction  
product)

IT 80-54-6D, Lilial, reaction products with amines 94-09-7D,  
Ethyl-4-amine benzoate, reaction products with active ketone or  
aldehyde containing component 99-49-0D, Carvone, reaction products  
with amines 104-55-2D, Cinnamaldehyde, reaction products with  
amines 106-23-0D, Citronellal, reaction products with amines  
111-30-8D, Glutaraldehyde, reaction products with amines  
120-57-0D, Heliotropine, reaction products with amines 134-62-3D,  
N,N-Diethyl m-toluamide, reaction products with amines 488-43-7D,  
Glu-camine, reaction products with active ketone or aldehyde containing  
component 4605-14-5D, N,N'-Bis-(3-aminopropyl)-1,3-propanediamine,  
reaction products with active ketone or aldehyde containing component  
5392-40-5D, Citral, reaction products with amines 7209-38-3D,  
1,4-Bis-(3-aminopropyl) piperazine, reaction products with active  
ketone or aldehyde containing component 7388-22-9D,  
 $\gamma$ -Methyl-ionone, reaction products with amines 9002-89-5D,  
Polyvinylalcohol, amino substituted, reaction products with active  
ketone or aldehyde containing component 9002-98-6D, reaction products  
with active ketone or aldehyde containing component 18829-56-6D,  
trans-2-Nonenal, reaction products with amines 23726-93-4D,  
Damascenone, reaction products with amines 24851-98-7D, Hedione,  
reaction products with amines 25104-18-1D, Polylysine, reaction  
products with active ketone or aldehyde containing component  
26336-38-9D, Polyvinylamine, reaction products with active ketone or  
aldehyde containing component 38000-06-5D, Polylysine, reaction  
products with active ketone or aldehyde containing component  
43052-87-5D,  $\alpha$ -Damascone, reaction products with amines  
57378-68-4D,  $\delta$ -Damascone, reaction products with amines  
64274-27-7D, Rotundial, reaction products with amines 68039-49-6D,

reaction products with amines 87578-93-6b, reaction products with amines 125109-85-5D, Florhydrat, reaction products with amines

RL: TEM (Technical or engineered material use); USES (Uses)  
(process for producing particles of amine reaction product)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 9 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:335781 HCPLUS Full-text

DOCUMENT NUMBER: 131:43777

TITLE: Assembly tests of "Nero d'Avola" with wines derived from an allochthonous cultivar: a study of polyphenolic and aromatic profiles

AUTHOR(S): Papucci, A.; Monte, L. G.; D'Agostino, S.; Agozzino, P.; Avellone, G.

CORPORATE SOURCE: Istituto Regionale della Vite e del Vino, Palermo, 90143, Italy

SOURCE: Industrie delle Bevande (1999), 28(160), 119-126

PUBLISHER: CODEN: INBEW; ISSN: 0390-0541

DOCUMENT TYPE: Chiriotti Editori spa

LANGUAGE: Journal

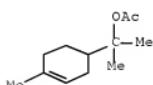
AB The polyphenolic and aromatic profiles of 5 red Sicilian wine mixes made with decreasing amts. of "Nero d'Avola" and increasing amts. of other wines (Cabernet-Sauvignon, Merlot, Syrah) were studied. The polyphenolic values and color indexes showed that the wines were suitable for aging. The wines had an intense and stable color and a mature bouquet. Solid phase microextn. (SPME) from head space coupled with capillary GC-MS is an excellent method for the determination of volatile wine components. It is selective, sensitive, quick, simple, and relatively inexpensive.

IT 80-26-2,  $\alpha$  Terpineol acetate

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(polyphenolic and volatile compound profiles of Nero d'Avola mixed red wines)

RN 80-26-2 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



CC 17-1 (Food and Feed Chemistry)

IT Phenols, biological studies

RL: ANT (Analyte); FFD (Food or feed use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(polyphenols, nonpolymeric; polyphenolic and volatile compound profiles of Nero d'Avola mixed red wines)

IT 60-12-8, Phenylethyl alcohol 71-36-3, 1-Butanol, biological studies 78-70-6 78-83-1, Isobutanol, biological studies

80-26-2,  $\alpha$  Terpineol acetate 97-62-1, Ethyl isobutyrate 97-64-3, Ethyl lactate 98-55-5,  $\alpha$  Terpineol 100-51-6, Benzylalcohol, biological studies 101-97-3, Ethyl benzeneacetate 103-45-7, 2-Phenylethyl acetate 105-54-4, Ethyl butyrate 106-30-9, Ethyl heptanoate 106-32-1, Ethyl caprylate 106-33-2, Ethyl laurate 108-64-5, Ethyl isovalerate 110-38-3, Ethyl caprinate 111-11-5, Methyl caprylate 111-27-3, 1-Hexanol, biological studies 111-70-6, 1-Heptanol 111-87-5, 1-Octanol, biological studies 123-25-1, Di ethyl succinate 123-51-3, 3 Methyl 1 butanol 123-66-0, Ethyl caproate 123-92-2, Isoamyl acetate 124-06-1, Ethyl tetradecanoate 124-07-2, Octanoic acid, biological studies 141-78-6, Acetic acid ethyl ester, biological studies 142-62-1, Hexanoic acid, biological studies 142-92-7, Hexyl acetate 143-08-8, 1-Nonanol 334-48-5, Decanoic acid 544-12-7, 3-Hexen-1-ol 628-97-7, Ethyl hexadecanoate 818-38-2, Di ethyl pentanediol 7452-79-1, Ethyl 2-methylbutanoate 11063-77-7, cis-Linalool oxide 30364-38-6, 1,2-Dihydro-1,1,6-trimethylphthalene

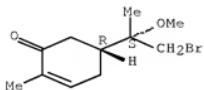
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (polyphenolic and volatile compound profiles of Nero d'Avola mixed red wines)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1999:8667 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:167855  
 TITLE: A new approach for the generation and reaction of organotin hydrides: the development of reactions catalytic in Tin  
 AUTHOR(S): Terstiege, Ina; Maleczka, Robert E., Jr.  
 CORPORATE SOURCE: Department of Chemistry, Michigan State University, East Lansing, MI, 48824, USA  
 SOURCE: Journal of Organic Chemistry (1999), 64(2), 342-343  
 CODEN: JOCEAH; ISSN: 0022-3263  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 130:167855  
 AB The authors have developed a methodol. that allows the in situ generation of Sn hydride from inexpensive starting materials that can be applied to the recycling of tributyltin hydride in reactions catalytic in Sn. Also, since carbonyl compds. are not reduced under these reaction conditions it would appear this methodol. is inherently more chemoselective than the borohydride method of recycling Sn halides back to Sn hydride. For example, a solution of o-iodoanisole (2.5 mmol), Bu<sub>3</sub>SnCl (0.25 mmol) and AIBN (catalyst) in refluxing toluene (5 mL) was treated with an aqueous KF solution (5.25 mmol; 1.0 mL H<sub>2</sub>O) and polymethylhydrosiloxane (5.25 mmol) in two portions over 14 h. An aqueous NaOH-solution (3M, 4 mL) was added to the reaction and the mixture was allowed to stir overnight. The organic phase was separated, washed with saturated NH<sub>4</sub>Cl solution, H<sub>2</sub>O and brine and dried over MgSO<sub>4</sub>. Evaporation of the solvent gave 290 mg of a clear liquid which by 1H NMR contains approx. 96% yield of anisole.  
 IT 179093-74-4, (5R)-5-[(2S)-1-Bromo-2-methoxy-2-propyl]-2-methyl-2-cyclohexen-1-one  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (intramol. cyclocondensation using catalytic organotin hydride formed in situ)

RN 179093-74-4 HCPLUS  
 CN 2-Cyclohexen-1-one, 5-[(1S)-2-bromo-1-methoxy-1-methylethyl]-2-methyl-, (5R)- (CA INDEX NAME)

Absolute stereochemistry.



CC 21-2 (General Organic Chemistry)

Section cross-reference(s): 29

IT 24892-63-5, Allyl 2-iodophenyl ether 160846-00-4,  
 trans-3-Bromo-2-allyloxytetrahydropyran 179093-74-4,  
 (5R)-5-[(2S)-1-Bromo-2-methoxy-2-propyl]-2-methyl-2-cyclohexen-1-one  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (intramol. cyclocondensation using catalytic organotin hydride  
 formed in situ)

IT 9004-73-3, Monomethylsiloxane, SRU 49718-23-2, Methylsilanediol  
 homopolymer  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with tributyltin chloride/potassium fluoride for  
 generation of catalytic organotin hydride for organic synthesis)

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L17 ANSWER 11 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:407889 HCPLUS Full-text

DOCUMENT NUMBER: 129:154699

ORIGINAL REFERENCE NO.: 129:31389a,31392a

TITLE: Chemically amplified photoresist composition and  
 patterning using it

INVENTOR(S): Maeda, Katsumi; Iwasa, Shigeyuki; Nakano,  
 Kaichiro; Hasegawa, Etsuo

PATENT ASSIGNEE(S): NEC Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10171122	A	19980626	JP 1996-335603	199612 16
				<--
JP 2943740	B2	19990830	JP 1996-335603	199612 16
PRIORITY APPLN. INFO.:				<--

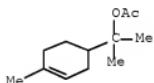
AB In the title composition containing a resin in which the acid-decomposable groups are decomposed by the action of acid to increase the solubility in aqueous alkaline solns. and a photoacid-generating agent, the acid-decomposable group has the general formula CMe<sub>2</sub>R<sub>1</sub>R<sub>2</sub> (R<sub>1</sub> = C<sub>6</sub>-10 divalent hydrocarbon having cyclic hydrocarbon groups; R<sub>2</sub> = H, C<sub>1</sub>-4 alkyl, acyl). The composition is applied on a substrate to be processed, pre-baked, patternwise exposed with light of wavelength 180-220 nm, post-baked, and developed to form a resist pattern. The composition shows high transparency, dry-etching resistance, adhesion to substrates, resolution, and developability.

IT 80-26-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(patterning of chemical amplified photoresist composition with UV)

RN 80-26-2 HCAPLUS

CN 3-Cyclohexene-1-methanol, *α,α,4*-trimethyl-, 1-acetate  
(CA INDEX NAME)



IC ICM G03F007-039

ICS G03F007-30; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST chem amplification photoresist acid decomposable group; cycloalkyl ester acrylate polymer resist UV

IT 80-26-2 814-68-6, Acryloyl chloride 920-46-7,

Methacryloyl chloride 28132-01-6,

Tricyclo[5.2.1.0<sub>2,6</sub>]decane-4,8-dimethanol 38049-26-2,

Dihydrocarveol 58506-23-3, 2,8-Dihydroxy-p-menthane 195057-79-5,

8-tert-Butoxycarbonyltetracyclo[4.4.0.12,5.17,10]-3-dodecene

RL: RCT (Reactant); RACT (Reactant or reagent)

(patterning of chemical amplified photoresist composition with UV)

L17 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:151203 HCAPLUS Full-text

DOCUMENT NUMBER: 128:193991

ORIGINAL REFERENCE NO.: 128:38309a

TITLE: Rinse-added fabric softening compositions comprising  $\beta$ -keto esters as fragrance delivery compounds

INVENTOR(S): Sivik, Mark Robert; Severns, John Cort; Hartman, Frederick Anthony; Burkes, Raymond Vernon; Costa, Jill Bonham; Gardlik, John Michael

PATENT ASSIGNEE(S): Procter & Gamble Company, USA

SOURCE: PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 10

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9807811	A2	19980226	WO 1997-US14610	199708 19
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W: BR, CA, CN, CZ, JP, MX, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2263514	A1	19980226	CA 1997-2263514	199708 19
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EP 927238	A2	19990707	EP 1997-937319	199708 19
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EP 927238	B1	20030521		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9711631	A	19990824	BR 1997-11631	199708 19
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CN 1233283	A	19991027	CN 1997-198733	199708 19
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CN 1233284	A	19991027	CN 1997-198758	199708 19
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ES 2187807	T3	20030616	ES 1997-937323	199708 19
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ES 2194212	T3	20031116	ES 1997-937319	199708 19
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US 6093691	A	20000725	US 1999-242623	199902 19
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PRIORITY APPLN. INFO.:			US 1996-24117P	P

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WO 1997-US14610

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199708

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## OTHER SOURCE(S):

MARPAT 128:193991

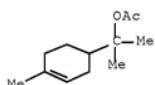
AB The title compns., useful in laundry detergents, comprise fragrance delivery system containing  $\beta$ -keto ester pro-fragrance compds.  $\text{RCO}\text{CR}_2\text{R}_3\text{COR}_1$  [ $\text{R} = \text{C1-30 alkyl, C3-30 (un)substituted cycloalkyl, C6-30 (un)substituted aryl, etc.}; \text{R}_1 = \text{alkoxy group derived from a fragrance raw material alc.}; \text{R}_2, \text{R}_3 = \text{H, C1-20 alkyl, C2-20 alkyleneoxy, C7-20 (un)substituted alkylenearyl; etc.}] which deliver highly fabric substantive pro-accords to the fabric surface during laundering and provide a long lasting ( $\leq 2$  wk) "freshness" or "clean" scent to fabric. A method for delivering a pleasurable scent to fabric by contacting the fabric with a laundry detergent composition which contains the fragrance-releasable pro-accords is also claimed. A typical fabric softener contained di(soft tallowyloxyethyl)dimethylammonium chloride 25.0, EtOH 4.0, HCl 0.01, CaCl<sub>2</sub> 0.46, DC 2310 (silicone defoamer) 0.15, Kathon CG (preservative) 0.0003, soil release polymer 0.40, pro-fragrance 2,6-dimethyl-7-octen-2-yl 3-(4-nitrophenyl)-3-oxopropionate [preparation by condensation of 2,6-dimethyl-7-octen-2-yl acetate with p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COCl in presence of (Me<sub>2</sub>CH)<sub>2</sub>NLi in THF given] 0.50 and H<sub>2</sub>O 69.38%.$

IT 80-26-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation with naphthoyl chloride; rinse-added fabric softening compns. comprising  $\beta$ -keto esters as fragrance delivery compds.)

RN 80-26-2 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha, \alpha, 4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



IC ICM C11D003-00

CC 46-5 (Surface Active Agents and Detergents)

IT Surfactants  
(amphoteric; rinse-added fabric softening compns. and method of use for the delivery of fragrance derivs.)

IT Surfactants  
(anionic; rinse-added fabric softening compns. and method of use for the delivery of fragrance derivs.)

IT Surfactants  
(cationic; rinse-added fabric softening compns. and method of use for the delivery of fragrance derivs.)

IT Detergents  
(laundry; rinse-added fabric softening compns. and method of use for the delivery of fragrance derivs.)

IT Surfactants  
(nonionic; rinse-added fabric softening compns. and method of use for the delivery of fragrance derivs.)

IT Carboxylic acids, uses  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
 TEM (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (oxo, esters; rinse-added fabric softening compns. and  
 method of use for the delivery of fragrance derivs.)

IT Perfumes  
 (rinse-added fabric softening compns. and method of use  
 for the delivery of fragrance derivs.)

IT Surfactants  
 (zwitterionic; rinse-added fabric softening compns. and  
 method of use for the delivery of fragrance derivs.)

IT 80-26-2 115-95-7, Linalyl acetate 3681-71-8,  
 cis-3-Hexenyl acetate 50816-18-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation with naphthoyl chloride; rinse-added fabric  
 softening compns. comprising  $\beta$ -keto esters as fragrance  
 delivery compd.)

L17 ANSWER 13 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1998:151202 HCPLUS Full-text  
 DOCUMENT NUMBER: 128:193990  
 ORIGINAL REFERENCE NO.: 128:38308h,38309a  
 TITLE: Hand-wash laundry detergent compositions  
 comprising  $\beta$ -keto esters as fragrance  
 delivery compounds  
 INVENTOR(S): Hartman, Frederick Anthony; Sivik, Mark Robert;  
 Costa, Jill Bonham; Severns, John Cort  
 PATENT ASSIGNEE(S): Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 61 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 10  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9807810	A2	19980226	WO 1997-US14544	199708 19
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W: BR, CN, MX, TR, US				
CN 1233281	A	19991027	CN 1997-198731	199708 19
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CN 1233283	A	19991027	CN 1997-198733	199708 19
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CN 1233284	A	19991027	CN 1997-198758	199708 19
				<--

CN 1233947	A	19991103	CN 1997-198887	199708 19
BR 9712787	A	19991214	BR 1997-12787	199708 19
ES 2187807	T3	20030616	ES 1997-937323	199708 19
ES 2194212	T3	20031116	ES 1997-937319	199708 19
PRIORITY APPLN. INFO.:				US 1996-24117P P 199608 19
				WO 1997-US14544 W 199708 19
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OTHER SOURCE(S): MARPAT 128:193990

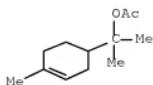
AB The title detergents which deliver pro-fragrances to the fabric surface during laundering comprise  $\beta$ -keto ester pro-fragrance compds. R1R2R3CCOR [R = alkoxy group derived from a fragrance raw material alc.; R1-R3 = H, C1-30 alkyl, C3-30 cycloalkyl, C6-30 (alkylene)aryl; R1R2R3 can form C6-30 (un)substituted ring, etc.]. The pro-fragrances are highly substantive to the fabric, they release their fragrance raw materials over an extended period of time and provide a long lasting "freshness" or "clean" scent to fabric. A method for delivering a pleasurable scent to fabric which has a lasting freshness quality by contacting the fabric with a laundry detergent composition which comprises the pro-fragrances is also claimed. A typical detergent contained Na C12 alkylbenzenesulfonate 18.00, ethoxylated (3 EO) C12-15 alkyl sulfate Na salt 1.00, C12-14 alkyldimethyl(hydroxyethyl)ammonium chloride 0.60, Na tripolyphosphate 22.50, maleic/acrylic acid copolymer 0.60, CMC 0.20, Na2CO3 13.30, Dequest 2060 0.30, Na nonyloxybenzenesulfonate 0.65, Na perborate 0.70, soil release polymer 0.20, brightener-49 0.05, brightener-15 0.15, Savinase Ban 0.45, Carezyme (5T) 0.07, perfume 0.33, pro-fragrance 3,7-dimethyl-1,6-octadien-3-yl 3-(4-methoxyphenyl)-3-oxopropionate [preparation by condensation of 3,7-dimethyl-1,6-octadien-3-yl acetate with p-anisoyl chloride in presence of (Me2CH)2NLi in THF given] 0.20%, photobleach 45 ppm, and minors and H2O balance.

IT 80-26-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation with naphthoyl chloride; hand-wash laundry detergent compns. comprising  $\beta$ -keto esters as fragrance delivery compds.)

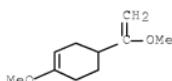
RN 80-26-2 HCPLUS

CN 3-Cyclohexene-1-methanol,  $\alpha,\alpha,4$ -trimethyl-, 1-acetate  
(CA INDEX NAME)



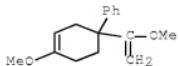
IC ICM C11D003-00  
 CC 46-5 (Surface Active Agents and Detergents)  
 IT 80-26-2 115-95-7, Linalyl acetate 3681-71-8,  
*cis*-3-Hexenyl acetate 50816-18-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation with naphthoyl chloride; hand-wash laundry  
 detergent compns. comprising  $\beta$ -keto esters as fragrance  
 delivery compds.)

L17 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1965:51217 HCAPLUS Full-text  
 DOCUMENT NUMBER: 62:51217  
 ORIGINAL REFERENCE NO.: 62:9030f-g  
 TITLE: Bridged ring compounds. II. A novel  
 method for the preparation of  
 bicyclooctane systems  
 AUTHOR(S): Morita, Kenichi; Nishimura, Michio; Suzuki,  
 Zenosuke  
 CORPORATE SOURCE: Toyo Rayon Co., Ltd., Kamakura, Japan  
 SOURCE: Journal of Organic Chemistry (1965),  
 30(2), 533-8  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB cf. CA 58, 5757b. Reaction of 3-methyl-3-buten-2-one, trans-3-penten-2-one,  
 and trans-3-methyl-3-penten-2-one each with tri-Me orthoformate in the  
 presence of orthophosphoric acid gave substituted 4-methoxybicyclo  
 [2.2.2]octanones. The intermediate of the reaction was found to be a  
 1-methoxy-4-(1-methoxyvinyl)-1-cyclohexene derivative. An acid-catalyzed  
 cyclization of 4-substituted  
 4-(1-methoxyvinyl)-1-methoxy-1-cyclohexenes gave 4-substituted 1,3-  
 dimethoxybicyclo [2.2.2] oct-2-enes, whereas of 1,4-diphenyl-4-vinyl-1-  
 cyclohexene gave 1,4-diphenylbicyclo[3.2.1]oct-3-ene.  
 IT 1855-69-2P, Cyclohexene, 1-methoxy-4-(1-methoxyvinyl)-  
 3850-72-4P, Cyclohexene,  
 1-methoxy-4-(1-methoxyvinyl)-4-phenyl- 3850-73-5P,  
 Cyclohexene, 1-methoxy-4-(1-methoxyvinyl)-4-methyl-  
 RL: PREP (Preparation)  
 (preparation of)  
 RN 1855-69-2 HCAPLUS  
 CN Cyclohexene, 1-methoxy-4-(1-methoxyethenyl)- (CA INDEX NAME)



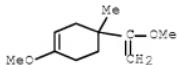
RN 3850-72-4 HCAPLUS

CN Benzene, [4-methoxy-1-(1-methoxyethenyl)-3-cyclohexen-1-yl]- (CA INDEX NAME)



RN 3850-73-5 HCPLUS

CN Cyclohexene, 1-methoxy-4-(1-methoxyethenyl)-4-methyl- (CA INDEX NAME)



CC 34 (Alicyclic Compounds)

IT 3-Penten-2-one, *trans*-, polymer with styrene  
(reaction with tri-Me orthoformate)

IT 1855-69-2P, Cyclohexene, 1-methoxy-4-(1-methoxyvinyl)-  
1855-70-5P, 2-Butanone, 4-methoxy-3-methyl-, dimethyl acetal  
1855-70-5P, Butane, 1,3,3-trimethoxy-2-methyl- 1855-71-6P,  
3-Buten-2-one, 3-methyl-, dimethyl acetal 1855-72-7P,  
3-Penten-2-one, 3-methyl-, dimethyl acetal 1855-72-7P, 2-Pentene,  
4,4-dimethoxy-3-methyl- 2035-91-8P, Heptanedioic acid,  
4-acetyl-4-methyl-, diethyl ester 2101-28-2P, 2-Butanone,  
3-methyl-4-morpholino-, hydrochloride 3850-57-5P,  
Bicyclo[2.2.2]octan-2-one, 4-hydroxy-1-methyl-, oxime 3850-58-6P,  
Bicyclo[2.2.2]octan-2-one, 4-methoxy-1-phenyl-, oxime 3850-59-7P,  
Bicyclo[2.2.2]octan-2-one, 4-methoxy-1,5,6,7-tetramethyl-, oxime  
3850-60-0P, Bicyclo[2.2.2]octan-2-one, 4-methoxy-1,5-dimethyl-,  
oxime 3850-61-1P, 1H-4,8a-Ethano-as-indacen-9-one,  
decahydro-4-methoxy- 3850-62-2P, Bicyclo[2.2.2]octan-2-one,  
4-methoxy-1-phenyl- 3850-63-3P, Bicyclo[2.2.2]octane-2-carboxylic  
acid, 1-methoxy-4-methyl-5-oxo-, methyl ester 3850-64-4P,  
Bicyclo[2.2.2]octan-2-one, 4-methoxy-1,5-dimethyl- 3850-66-6P,  
Bicyclo[3.2.1]octane, 1,4-diphenyl- 3850-67-7P,  
Bicyclo[3.2.1]oct-2-ene, 2,5-diphenyl- 3850-69-9P,  
Cyclohexanecarboxylic acid, 5-(1-methoxyvinyl)-5-methyl-2-oxo-,  
methyl ester 3850-70-2P, Heptanedioic acid, 4-acetyl-4-methyl-,  
dimethyl ester, di-Me acetal 3850-71-3P, Heptanedioic acid,  
4-acetyl-4-methyl-, dimethyl ester 3850-72-4P,  
Cyclohexene, 1-methoxy-4-(1-methoxyvinyl)-4-phenyl-  
3850-73-5P, Cyclohexene,  
1-methoxy-4-(1-methoxyvinyl)-4-methyl- 3850-74-6P, 2-Butanone,  
3-methyl-4-morpholino- 3850-75-7P, Bicyclo[2.2.2]octan-2-one,  
4-methoxy-6,7-dimethyl- 3850-76-8P, Bicyclo[2.2.2]octan-2-one,  
4-methoxy-1,5,6,7-tetramethyl- 3850-77-9P,  
Bicyclo[2.2.2]oct-2-ene, 2,4-dimethoxy-1,5,6,7-tetramethyl-  
3850-78-0P, 2-Pentanone, 4-methoxy-3-methyl-, dimethyl acetal  
3850-78-0P, Pentane, 2,2,4-trimethoxy-3-methyl- 3907-08-2P,  
Bicyclo[2.2.2]octan-2-one, 4-methoxy-1-methyl-, oxime 3907-09-3P,

2H-4a, 9-Ethanophenanthren-12-one, dodecahydro-9-methoxy-3907-10-6P, Bicyclo[2.2.2]octane-2-carboxylic acid, 1-methoxy-4-methyl-5-oxo- 3907-11-7P, Bicyclo[2.2.2]octan-2-one, 4-methoxy-1-methyl- 3907-12-8P, Bicyclo[2.2.2]oct-2-ene, 2,4-dimethoxy-1,5-dimethyl- 25988-32-3P, 3-Buten-2-one, 3-methyl-, homopolymer

RL: PREP (Preparation)  
(preparation of)

L17 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1964:60540 HCAPLUS Full-text  
DOCUMENT NUMBER: 60:60540  
ORIGINAL REFERENCE NO.: 60:10566h, 10567a-d  
TITLE: Simple method for the preparation of  
bicyclo[2.2.2]octane systems from methyl vinyl  
ketone derivatives  
AUTHOR(S): Morita, Kenichi; Suzuki, Zennosuke  
CORPORATE SOURCE: Toyo Rayon Co., Kamakura, Japan  
SOURCE: Tetrahedron Letters (1964), (5-6),  
263-7  
CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.  
AB cf. CA 58, 5757b. AcCMe:CH2 (0.5M), 0.5M HC(OMe)3, and 0.02M H3PO4 distilled slowly 7 hrs., the residue hydrolyzed with dilute HCl at 20° 5 min., and the product distilled yielded 72% octanone (I, R = Me, R1 = H) (II), b12 114-16°, n20D 1.4799; oxime m. 128-9°. Analogous reactions of AcCH:CHMe and AcCMe:CHMe with HC(OMe)3 yielded 10% I (R = H, R1 = Me) (III), b5 94-5°, n20D 1.4792; and 54% I (R = R1 = Me) (IV), b3 113-16°, n20D 1.4859; oxime m. 150-1°. The low yield of III suggested formation of MeOCMe:CHCH2CH2 as the main reaction with subsequent polymerization. AcCH:CH2 gave only polymeric material and quant. yields of HCO2Me and MeOH. Me2CH:CHAc in MeOH treated with HC(OMe)3 in the presence of H2SO4 gave a complex mixture but no bicyclooctane could be isolated. AcCMe:CHMe in MeOH treated with HC(OMe)3 in the presence of H2SO4 5 hrs. at 20° yielded 50% IV and 24% mixture, b5 40-3°, separated by vapor phase chromatography to give MeC(OMe)2CMe:CHMe, n20D 1.4400, and MeCH(OMe)CHMeC(OMe)2Me, n20D 1.4222. II, III, and IV appeared to consist of one stereochemical modification, whereas the octanone (V, n = 3), b2.5 142-3°, n26D 1.5215, derived from 1-acetyl-1-cyclopentene, was a mixture of 2 diastereomers. Similarly, V (n = 4), derived from 1-acetyl-1-cyclohexene, was a mixture of a major isomer, n26D 1.5290, and a minor isomer, m. 79.0-9.5°. Treatment of 4-acetyl-4-methyl-1-cyclohexanone in MeOH at 25° with HC(OMe)3 yielded 73% 4-(1,1-dimethoxyethyl)-4-methyl-1-methoxy-1-cyclohexene, b14 121.0-2.5°, n20D 1.4751, boiled 5 hrs. in Ac2OCSiH5N to yield 80% 4-(1-methoxyvinyl)-4-methyl-1-methoxy-1-cyclohexene, b14 121-2°, n20D 1.4825, contaminated with a small amount of oxo compound. The vinyl derivative refluxed 3 hrs. in C6H6 with BF3-Et2O and the intermediate octene hydrolyzed gave 80% octanone, b17 117-19°, n20D 1.4802; oxime m. 127-8°. The sequence of reactions gave pos. evidence that the intermediate of the conversion of Me vinyl ketone derivs. into bicyclo[2.2.2]-octanes is the hexene derivative (VI). Infrared and nuclear magnetic resonance spectral data are given for the compds. prepared

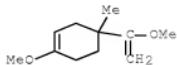
IT 3850-73-5P, Cyclohexene,  
1-methoxy-4-(1-methoxyvinyl)-4-methyl- 96535-85-2P,  
Cyclohexene, 4-(1,1-dimethoxyethyl)-1-methoxy-4-methyl-

RL: PREP (Preparation)  
(preparation of)

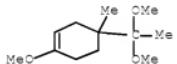
RN 3850-73-5 HCAPLUS

CN Cyclohexene, 1-methoxy-4-(1-methoxyethenyl)-4-methyl- (CA INDEX)

NAME)



RN 96535-85-2 HCPLUS  
 CN Cyclohexene, 4-(1,1-dimethoxyethyl)-1-methoxy-4-methyl- (CA INDEX  
 NAME)



CC 34 (Alicyclic Compounds)  
 IT Polymerization  
 (of 3-buten-2-ones)  
 IT 7207-49-0P  
 RL: SPN (Synthetic preparation); PRP (Properties); PREP  
 (Preparation)  
 (Simple method for the preparation of  
 bicyclo[2.2.2]octane systems from methyl vinyl ketone  
 derivatives)  
 IT 1855-72-7P, 3-Pentene-2-one, 3-methyl-, dimethyl acetal 1855-72-7P,  
 2-Pentene, 4,4-dimethoxy-3-methyl- 3850-59-7P,  
 Bicyclo[2.2.2]octan-2-one, 4-methoxy-1,5,6,7-tetramethyl-, oxime  
 3850-60-0P, Bicyclo[2.2.2]octan-2-one, 4-methoxy-1,5-dimethyl-,  
 oxime 3850-61-1P, 1H-4,8a-Ethano-as-indacen-9-one,  
 decahydro-4-methoxy-, stereoisomers 3850-64-4P,  
 Bicyclo[2.2.2]octan-2-one, 4-methoxy-1,5-dimethyl-  
 3850-73-5P, Cyclohexene,  
 1-methoxy-4-(1-methoxyvinyl)-4-methyl- 3850-75-7P,  
 Bicyclo[2.2.2]octan-2-one, 4-methoxy-6,7-dimethyl- 3850-76-8P,  
 Bicyclo[2.2.2]octan-2-one, 4-methoxy-1,5,6,7-tetramethyl-  
 3850-78-0P, 2-Pentanone, 4-methoxy-3-methyl-, dimethyl acetal  
 3850-78-0P, Pentane, 2,2,4-trimethoxy-3-methyl- 3907-08-2P,  
 Bicyclo[2.2.2]octan-2-one, 4-methoxy-1-methyl-, oxime 3907-11-7P,  
 Bicyclo[2.2.2]octan-2-one, 4-methoxy-1-methyl- 95801-51-7P,  
 9-Phenanthrenecarboxylic acid,  
 1,2,3,4,5,6,7,8,8a,9,10,10a-dodecahydro-9-hydroxy-, ethyl ester,  
 acetate 96535-85-2P, Cyclohexene,  
 4-(1,1-dimethoxyethyl)-1-methoxy-4-methyl- 96535-85-2P,  
 Ketone, 4-methoxy-1-methyl-3-cyclohexen-1-yl methyl, dimethyl acetal  
 RL: PREP (Preparation)  
 (preparation of)

L17 ANSWER 16 OF 17 HCPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1949:13080 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 43:13080  
 ORIGINAL REFERENCE NO.: 43:25761,2577a-e  
 TITLE: Acetylene derivatives. LXXXII. Dimerization and

structure of the dimers of  
2-methoxy-1,3-butadiene and  
2-(formyloxy)-1,3-butadiene

AUTHOR(S):  
Nazarov, I. N.; Verkholetova, G. P.; Bergel'son,  
L. D.

SOURCE:  
Izvestiya Akademii Nauk SSSR, Seriya  
Khimicheskaya (1948) 511-18  
CODEN: IASKA6; ISSN: 0002-3353

DOCUMENT TYPE:  
Journal  
LANGUAGE:  
Unavailable

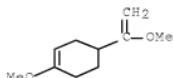
AB 2-(Formyloxy)-1,3-butadiene (I) and 2-methoxy-1,3-butadiene (II) dimerize on heating, giving p-substituted cyclohexenes: 1-[1-(formyl-oxy)vinyl]-4-(formyloxy)-3-cyclohexene(III), and 1-(1-methoxyvinyl)-4-methoxy-3-cyclohexene (IV), resp. I was prepared in 150-g. yield as follows: 6 g. Hg acetate, 5 ml. BF<sub>3</sub>.Et<sub>2</sub>O, and 6 ml. Ac<sub>2</sub>O at 60° treated with 138 g. dry HCO<sub>2</sub>H, followed by dropwise addition of 184 g. CH<sub>2</sub>:CHC.tplbond.CH and 120 ml. Et<sub>2</sub>O with stirring at 15-20° over 2 hrs., stirring 3 hrs., letting stand overnight, washing with water, and extracting with Et<sub>2</sub>O, gave I, b<sub>4</sub> 43-5°, n<sub>18D</sub> 1.4555. A less efficient preparation gives 150 g. I by passage of 420 g. CH<sub>2</sub>:CC.tplbond.CH into 6 g. Hg sulfate and 280 g. dry HCO<sub>2</sub>H at 18-20° with stirring over 4.5 hrs. and addition of 13 g. Hg sulfate over that period, followed by stirring 2 hrs. and letting stand overnight. Both procedures give variable amts. of III, the 2nd method giving up to 41 g. pure III, b<sub>4</sub> 119-20°, n<sub>20D</sub> 1.4830, d<sub>20</sub> 1.1174. III on stirring with 3% HCl gives a quant. yield of 4-acetylcylohexanone. I (38 g.) and 0.8 g. pyrogallol in 38 g. pure dioxane heated to 150° 5 hrs. gives pure III, b<sub>3</sub> 122-2.5°, n<sub>20D</sub> 1.4915, d<sub>20</sub> 1.1671; III can be successfully isolated only if all precautions against moisture are taken; III darkens on storage and liberates HCO<sub>2</sub>H and 4-acetylcylohexanone; the latter, most readily obtained with 3% HCl at room temperature, b<sub>2.7</sub> 99.5-100°, n<sub>20D</sub> 1.4756, d<sub>20</sub> 1.0580; disemicarbazone, m. 211-12° (from H<sub>2</sub>O); dioxime, m. 146-7° (from H<sub>2</sub>O); oxidation by KMnO<sub>4</sub> gives (CH<sub>2</sub>CO<sub>2</sub>H)<sub>2</sub> and β-acetyl adipic acid, m. 100.5-1.0° (semicarbazone, m. 89-9.5°). Ozonization of III gives HCO<sub>2</sub>H and β-acetyl adipic acid. Passage of 300 g. CH<sub>2</sub>:CC.tplbond.CH in 8 hrs. into a stirred mixture of 480 g. dry MeOH, 10 g. Hg sulfate, and 0.6 ml. concentrated H<sub>2</sub>SO<sub>4</sub> at 40°, with addition of 10 g. Hg sulfate, and stirring next day 3 hrs. at 55° and neutralizing with NaOMe, gave 537 g. 1,3,3-trimethoxybutane, b<sub>20</sub> 60-2°, n<sub>20D</sub> 1.4112; this (20 g.) and 0.5 g. powdered KOH heated to 140-50°, with dropwise addition of 80 g. more trimethoxybutane, gave 28 g. II, b. 74.8-5.3°, n<sub>20D</sub> 1.4438, and 14.5 g. 3,3-dimethoxy-1-butene, b. 98-100°, n<sub>20D</sub> 1.4040. II heated in dioxane with pyrogallol inhibitor 30 hrs. at 180-90° gave 6 g. IV, b<sub>2</sub> 87-8.8°, n<sub>20D</sub> 1.4820, d<sub>20</sub> 0.9952, easily hydrolyzed by 3% HCl to 4-acetylcylohexanone, while hydrogenation over Pd in Et<sub>2</sub>O gives 1-(1-methoxyethyl)-4-methoxycyclohexane, b<sub>5</sub> 97°, n<sub>20D</sub> 1.4744, d<sub>20</sub> 0.9836.

IT 1855-69-2P, Cyclohexene, 1-methoxy-4-(1-methoxyvinyl)-

RL: PREP (Preparation)  
(preparation of)

RN 1855-69-2 HCPLUS

CN Cyclohexene, 1-methoxy-4-(1-methoxyethenyl)- (CA INDEX NAME)



## IT Polymerization

(dimerization, of 2-(formyloxy)-1,3-butadiene and  
2-methoxy-1,3-butadiene)

IT 1855-69-2P, Cyclohexene, 1-methoxy-4-(1-methoxyvinyl)-  
6607-66-5P, 2-Butanone, 4-methoxy-, dimethyl acetal 72757-52-9P,  
3-Buten-2-one, dimethyl acetal 72757-52-9P, 1-Butene,  
3,3-dimethoxy- 854724-45-1P, 3-Cyclohexene-1-methanol,  
4-hydroxy- $\alpha$ -methylene-, diformate 855414-62-9P, Cyclohexane,  
1-methoxy-4-(1-methoxyethyl)-  
RL: PREP (Preparation)  
(preparation of)

L17 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1932:3775 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 26:3775

ORIGINAL REFERENCE NO.: 26:440b-i,441a

TITLE: Autoxidation of  $\alpha,\beta$ -unsaturated  
ketones. II

AUTHOR(S): Treibs, W.

SOURCE: Berichte der Deutschen Chemischen Gesellschaft  
[Abteilung] B: Abhandlungen (1931),  
64B, 2178-84

CODEN: BDCBAD; ISSN: 0365-9488

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. C. A. 25, 938. Harries represented the autoxidation of carvone to the diketone C10H14O2 (I) in the presence of Ba(OH)2 and a little MeOH by the equation C10H14O + H2O + O = I + H2O2. Engler and Weissberg assumed as intermediate product a hypothetical moloxide formed by addition of mol. O at the cyclic double bond. The yield of I was only 3-4% and the method used by T. for the autoxidation of pipеритоне, which gave 40-5% of HO acid (II) (see Paper I), yielded almost exclusively polymerized products with carvone. Weitz had found that H2O2 with,  $\alpha,\beta$ -unsatd. ketones in alkaline alc. solution forms keto oxides,  $-\text{CH}:\text{CH}.\text{CO} \rightarrow -\text{CH}.\text{O}.\text{CH}.\text{CO}-$ , which are quite reactive and on short boiling with alc. alkali rearrange into 1,2-diketones or the corresponding enols,  $-\text{CH}:\text{C}(\text{OH}).\text{CO}-$  (C. A. 16, 1232). Harries and Engler had deduced their scheme of the autoxidation of carvone from the appearance of small quantities of BaO2 but in view of the above results it seems more probable that there is first formed an unstable superoxide which with the alkali gives the metal peroxide and this then oxidizes the ketone to a keto oxide which then rearranges into the diketone under the influence of the alkali. If this is true, H2O2 with carvone and pipеритоне should give the same products as are formed by autoxidation, and such proved to be the case. Moreover, for preparative purposes the H2O2 method has the advantage that the conditions can be varied to a much greater degree and the production of resinous polymerization products can be almost completely avoided. Pipеритоне with H2O2 yielded the same II in about the same yield, and from carvone I was obtained in 30-40% yield. In addition to the alkali-soluble I, there were also obtained 2 alkali-insol. compds.: a quite viscous liquid, C11H18O3 (III), and a crystalline compound (C10H13O)20 or (C10H14O)20 (IV). III split off 1 MeO with HI with formation of resinous products, indicating that in its formation MeOH added at 1 of the double bonds (probably the aliphatic bond). Its n pointed to the presence of a double bond and it immediately reacted with KMnO4. That IV was formed from I or the intermediate keto oxide was indicated by the fact that the yield varied inversely with that of I. When the carvone was treated rapidly with all of the H2O2 at once, only I was formed, whereas when the reaction was carried out slowly the yield of I decreased and that of IV increased. Attempts to prepare IV by condensation of I with carvone were

unsuccessful, however. The presence of a HO and a C: O group was shown by the formation of an acetate and semicarbazone, resp. IV is unsatd. toward KMnO<sub>4</sub> and is resinified by HI. Its properties, as determined thus far, and its undoubted relationship to I are best represented by the accompanying formula (R : CMe:CH<sub>2</sub>). I now being readily available, it was more thoroughly studied. It sublimes easily and is volatile with steam, behaves on titration like a monobasic acid, is not precipitated from alkaline soins. by CO<sub>2</sub>, gives with Ac<sub>2</sub>O (with or without catalysts) only a monoacetate, is not methylated or benzoylated by alkaline Me<sub>2</sub>SO<sub>4</sub> or BzCl, and yields only a monosemicarbazone. Its chemical behavior is, therefore, best represented by the accompanying half-enol formula (hydroxycarvone). One of the characteristic reactions of carvone is its ready rearrangement into the aromatic carvacrol; the same reagents which catalyze this transformation (FeCl<sub>3</sub>, ZnCl<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub>) convert I into an isomer (V) which is precipitated from alkaline solution by CO<sub>2</sub>, forms a dibenzoate and a di-Me ether, gives a cornflower-blue, unstable color with FeCl<sub>3</sub> in water and a deep red color with the Liebermann reagent, and the red solution of its melt with anhydrous ZnCl<sub>2</sub> shows in alkali a yellow-green fluorescence. It is therefore undoubtedly the expected bivalent phenol 4,3,5-Me(HO)C<sub>6</sub>H<sub>2</sub>CHMe<sub>2</sub>, isomeric with thymohydroquinone which has a very similar m. p. and b. p. Two reactions are especially characteristic of V: (1) With oxidizing agents (FeCl<sub>3</sub>, dilute HNO<sub>3</sub>) in water it gives a yellow precipitate (turbidity in very dilute solution) drying to a brittle amorphous, pulverizable mass. (2) It is strongly autoxidizable; slowly in neutral, very rapidly in alkaline and especially in NH<sub>4</sub>OH solution, a blue-red color with bluish fluorescence develops from the surface of the solution; the crystals precipitated from alkaline solution become superficially red in the air after washing; in H or CO<sub>2</sub> the color does not appear; the dye thus formed acts as an indicator, the color disappearing on acidification. III, b17 150-60°, d1520 1.067, nD20 1.4899. IV, m. 154°; acetate, waxy fibers; semicarbazone, m. 220° (decomposition). Acetate of I, b15 154-6°, d1525 1.0740, nD20 1.49380. V, m. 130-2°; b. 294°; dibenzoate, m. 80°; di-Me ether, b20 142°, d1520 1.0016, nD20 1.5182.

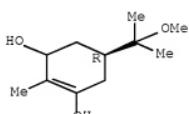
IT 910885-25-5P, Carvotanacetone, 6-hydroxy-8-methoxy-

RL: PREP (Preparation)  
(preparation of)

RN 910885-25-5 HCAPLUS

CN 1-Cyclohexene-1,3-diol, 5-(1-methoxy-1-methylethyl)-2-methyl-, (5R)-  
(CA INDEX NAME)

Absolute stereochemistry.



CC 10 (Organic Chemistry)

IT 4389-62-2P, 2,6-p-Cymenediol 4389-62-2P, 2,6-p-Cymenediol  
872267-16-8P, Carvone, 6-hydroxy-, acetate 876475-41-1P,  
2,6-p-Cymenediol, dibenzoate 876475-41-1P, 2,6-p-Cymenediol,  
dibenzoate 880143-59-9P, Carvone, 6-hydroxy- 910885-25-5P  
, Carvotanacetone, 6-hydroxy-8-methoxy-

RL: PREP (Preparation)  
(preparation of)

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